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Validation Report

KOE ENVIRONMENT CONSULTANCY, INC.

VALIDATION OF THE CDM-PROJECT:

Hebei Wasted Gas based Captive Power Plant
Project in Longgang Group

Report No. 1129604

2009, April 15

TÜV SÜD Industrie Service GmbH

Carbon Management Service
Westendstr. 199 - 80686 Munich – GERMANY

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Subject: Validation of a CDM Project	
Accredited TÜV SÜD Unit: TÜV SÜD Industrie Service GmbH Certification Body "climate and energy" Westendstr. 199 80686 Munich Germany	TÜV SÜD Contract Partner: Jiangsu TÜV Product Service Ltd., Shenzhen Branch 28/F, Anlian Building No. 4018 Jintian Road 518026 Shenzhen China
Project Participant: Xingtai Longhai Steel Group Co., Ltd. Jingguang road No.1, Xingtai , Hebei Province, P.R. China PEAR Carbon Offset Initiative,Ltd ., Tukiji 1-10-11, Chuo-ku,RATIO 1002, Tokyo	Project Site(s): Neiqiu County, Xingtai City, Hebei Province, P.R. China, longitude of 114°32 '14" and latitude 37°15'50"
Project Title: Hebei Wasted Gas based Captive Power Plant Project in Longgang Group	
Applied Methodology / Version: ACM0012 / Version 02	Scope(s): 1,4
First PDD Version: Date of issuance: 10-12-2007 Version No.: 01 Starting Date of GSP 18-02-2008	Final PDD version: Date of issuance: 09-04-2009 Version No.: 04
Estimated Annual Emission Reduction:	202,103 tCO ₂ e
Assessment Team Leader: Dr. Sven Kolmetz	Further Assessment Team Members: Kai (Carl) Zhou Georgios Agrafiotis
Summary of the Validation Opinion: <ul style="list-style-type: none"> <input checked="" type="checkbox"/> The review of the project design documentation and the subsequent follow-up interviews have provided TÜV SÜD with sufficient evidence to determine the fulfilment of all stated criteria. In our opinion, the project meets all relevant UNFCCC requirements for the CDM. Hence TÜV SÜD will recommend the project for registration by the CDM Executive Board in case letters of approval of all Parties involved will be available before the expiring date of the applied methodology(ies) or the applied methodology version respectively. <input type="checkbox"/> The review of the project design documentation and the subsequent follow-up interviews have not provided TÜV SÜD with sufficient evidence to determine the fulfilment of all stated criteria. Hence TÜV SÜD will not recommend the project for registration by the CDM Executive Board and will inform the project participants and the CDM Executive Board on this decision. 	

Abbreviations

ACM	Approved Consolidated Methodology
AM	Approved Methodology
AMS	Approved Methodology Small scale
BM	Build Margin
CAR	Corrective Action Request
CDM	Clean Development Mechanism
CDM EB	CDM Executive Board
CER	Certified Emission Reduction
CM	Combined Margin
CMP	Conference of the Parties serving as the Meeting of the Parties to the Kyoto Protocol
CR / CL	Clarification Request
DNA	Designated National Authority
DOE	Designated Operational Entity
EF	Emission Factor
EIA / EA	Environmental Impact Assessment / Environmental Assessment
ER	Emission Reduction
FAR	Forward Action Request
FSR	Feasibility Study Report
GHG	GreenHouse Gas(es)
IPCC	Intergovernmental Panel on Climate Change
IRL	Information Reference List
IRR	Internal Rate of Return
KP	Kyoto Protocol
MP	Monitoring Plan
NGO	Non Governmental Organisation
OM	Operational Margin
PDD	Project Design Document
PP	Project Participant
TÜV SÜD	TÜV SÜD Industrie Service GmbH
UNFCCC	United Nations Framework Convention on Climate Change
VVM	Validation and Verification Manual

Table of Contents	Page
1 INTRODUCTION	6
1.1 Objective	6
1.2 Scope	6
2 METHODOLOGY	7
2.1 Appointment of the Assessment Team	8
2.2 Review of Documents	9
2.3 Follow-up Interviews.....	9
2.4 Further cross-check.....	9
2.5 Resolution of Clarification and Corrective Action Requests	10
2.6 Internal Quality Control.....	10
3 SUMMARY	11
3.1 Approval	11
3.2 Participation.....	11
3.3 Project design document.....	11
3.4 Project description	12
3.5 Baseline and monitoring methodology	12
3.5.1 Applicability of the selected methodology	12
3.5.2 Project boundary.....	13
3.5.3 Baseline identification	13
3.5.4 Algorithm and/or formulae used to determine emission reductions.....	14
3.5.5 Project emissions.....	15
3.5.6 Leakage	15
3.5.7 Emission Reductions	15
3.6 Additionality	15
3.6.1 Prior consideration of the clean development mechanism	16
3.6.2 Identifications of alternatives	18
3.6.3 Investment analysis	18
3.6.4 Barrier analysis	18
3.6.5 Common practice analysis.....	19
3.7 Monitoring plan	19
3.8 Sustainable development	20
3.9 Local stakeholder consultation	20
3.10 Environmental impacts	20

4	COMMENTS BY PARTIES, STAKEHOLDERS AND NGOS	21
	VALIDATION OPINION	22
Annex 1: Validation Protocol		
Annex 2: Information Reference List		

1 INTRODUCTION

1.1 Objective

The validation objective is an independent assessment by a Third Party (Designated Operational Entity = DOE) of a proposed project activity against all defined criteria set for the registration under the Clean Development Mechanism (CDM). Validation is part of the CDM project cycle and will finally result in a conclusion by the executing DOE whether a project activity is valid and should be submitted for registration to the CDM Executive Board (CDM-EB). The ultimate decision on the registration of a proposed project activity rests at the CDM-EB and the Parties involved.

The project activity discussed by this validation report has been submitted under the project title:

Hebei Wasted Gas based Captive Power Plant Project in Longgang Group

1.2 Scope

The scope of any assessment is defined by the underlying legislation, regulation and guidance given by relevant entities or authorities. In the case of CDM project activities the scope is set by:

- The Kyoto Protocol, in particular § 12 and modalities and procedures for the CDM
- Decision 2/CMP1 and Decision 3/CMP.1 (Marrakech Accords)
- Further COP/MOP decisions with reference to the CDM (e.g. decisions 4 – 8/CMP.1)
- Decisions and specific guidance by the EB published under <http://cdm.unfccc.int>
- Guidelines for Completing the Project Design Document (CDM-PDD), and the Proposed New Baseline and Monitoring Methodology (CDM-NM)
- Baselines and monitoring methodologies (including GHG inventories)
- Management systems and auditing methods
- Environmental issues relevant to the sectoral scope applied for
- Applicable environmental and social impacts and aspects of CDM project activity
- Sector specific technologies and their applications
- Current technical and operational knowledge of the specific sectoral scope and information on best practice

The validation is not meant to provide any consulting towards the project participant (PP). However, stated requests for clarifications, corrective actions and/or forwards actions may provide input for improvement of the project design.

Once TÜV SÜD receives a first PDD version, it is made publicly available at the UNFCCC webpage and at TÜV SÜD's webpage for starting a 30 day global stakeholder consultation process (GSP). In case of any request a PDD might be revised (under certain conditions the GSP could be repeated) and the final PDD will form the basis for the final evaluation as presented in this report. Information on the first and the final PDD version is presented in page 1.

The only purpose of a validation is its use during the registration process as part of the CDM project cycle. Hence, TÜV SÜD cannot be held liable by any party for decisions made or not made based on the validation opinion, which will go beyond that purpose.

2 METHODOLOGY

The project assessment applies standard auditing techniques to assess the correctness of the information provided by the project participants. The assessment is based on the “Clean Development Mechanism Validation and Verification Manual” version 01. The work starts with appointment of team covering the technical scope(s), sectoral scope(s) and relevant host country experience for evaluating the CDM project activity. Once the project is made available for the stakeholder consultation process, members of the team carry out the desk review, follow-up actions, resolution of issues identified and finally preparation of the validation report. The prepared validation report and other supporting documents then undergo an internal quality control by the CB “climate and energy” before submission to the CDM-EB.

In order to ensure transparency, assumptions are clear and explicitly stated; the background material is clearly referenced. . TÜV SÜD developed methodology-specific checklists and protocol customised for the project. The protocol shows, in a transparent manner, criteria (requirements), the discussion of each criterion by the assessment team and the results from validating the identified criteria. The validation protocol serves the following purposes:

It organises, details and clarifies the requirements a CDM project is expected to meet;

It ensures a transparent validation process where the validator will document how a particular requirement has been validated and the result of the validation and any adjustment made to the project design.

The validation protocol consists of three tables. The different columns in these tables are described in the figure below.

The completed validation protocol is enclosed in Annex 1 to this report.

Validation Protocol Table 1: Conformity of Project activity and PDD				
Checklist Topic / Question	Reference	Comments	PDD in GSP	Final PDD
<i>The checklist is organised in sections following the arrangement of the applied PDD version. Each section is then further sub-divided. The lowest level constitutes a checklist question / criterion.</i>	<i>Gives reference to documents where the answer to the checklist question or item is found in case the comment refers to documents other than the PDD.</i>	<i>The section is used to elaborate and discuss the checklist question and/or the conformance to the question. It is further used to explain the conclusions reached. In some cases sub-checklist are applied indicating yes/no decisions on the compliance with the stated criterion. Any Request has to be substantiated within this column</i>	<i>Conclusions are presented based on the assessment of the first PDD version. This is either acceptable based on evidence provided (✓), or a Corrective Action Request (CAR) due to non-compliance with the checklist question (See below). Clarification Request (CR) is used when the validation team has identified a need for further clarification. Forward action request to highlight issues related to project implementation that require review during the first verification.</i>	<i>Conclusions are presented in the same manner based on the assessment of the final PDD version and further documents including assumptions presented in the documentation.</i>

Validation Protocol Table 2: Resolution of Corrective Action and Clarification Requests			
Clarifications and corrective action requests	Ref. to table 1	Summary of project owner response	Validation team conclusion
<i>If the conclusions from table 1 are either a Corrective Action, a Clarification or a Forward action Request, these should be listed in this section.</i>	<i>Reference to the checklist question number in Table 1 where the issue is explained.</i>	<i>The responses given by the client or other project participants during the communications with the validation team should be summarised in this section.</i>	<i>This section should summarise the discussion on and revision to project documentation together with the validation team's responses and final conclusions. The conclusions should be reflected in Table 1, under "Final PDD".</i>

In case of a denial of the project activity more detailed information on this decision will be presented in table 3.

Validation Protocol Table 3: Unresolved Corrective Action and Clarification Requests		
Clarifications and corrective action requests	Id. of CAR/CR 1	Explanation of the Conclusion for Denial
<i>If the final conclusions from table 2 results in a denial the referenced request should be listed in this section.</i>	<i>Identifier of the Request.</i>	<i>This section should present a detail explanation, why the project is finally considered not to be in compliance with a criterion with a clear reference to the requirement which is not complied with.</i>

2.1 Appointment of the Assessment Team

According to the technical scopes and experiences in the sectoral or national business environment TÜV SÜD has composed a project team in accordance with the appointment rules of the TÜV SÜD certification body "climate and energy". The composition of an assessment team has to be approved by the Certification Body (CB) ensuring that the required skills are covered by the team. The CB TÜV SÜD operates four qualification levels for team members that are assigned by formal appointment rules:

- Assessment Team Leader (ATL)
- Greenhouse Gas Auditor (GHG-A)
- Greenhouse Gas Auditor Trainee (T)
- Experts (E)

It is required that the sectoral scope linked to the methodology has to be covered by the assessment team.

Name	Qualification	Coverage of technical scope	Coverage of sectoral expertise	Host country experience
Dr. Sven Kolmetz	ATL	☑	☑	☑
Kai (Carl) Zhou	GHG-A	☑	☑	☑
Georgios Agrafiotis	GHG-T	☑	☑	

Dr. Sven Kolmetz is physicist and ATL at the department “TÜV Carbon Management Service” located in the head office of TÜV SÜD Industrie Service GmbH in Munich, Germany. Furthermore he is officially authorized expert in the verification of GHG emissions in the framework of the European Emission Trading Scheme. Before entering TÜV SÜD he worked as energy consultant for industrial companies and as consultant for the German Federal Government on instruments for the reduction of GHG emissions.

Kai (Carl) Zhou is an auditor for environmental management systems (according to ISO 14001) at Jiangsu TUV Product Service Ltd. He is based in Shenzhen. In his position he is responsible for the implementation of validation, verification and certifications audits for management systems. He has received training in the CDM validation process and participated already in several CDM project assessments.

Georgios Agrafiotis is environmental engineer with M.Sc. in Sustainable Resource Management. He has work experience in the field of industrial environmental technology and protection and also in technical environmental projects. As GHG trainee he has been appointed scopes 1, 5 and 13 as per UNFCCC definition. Currently he is involved in more than 15 on-going validation and verification projects.

2.2 Review of Documents

A first version of the PDD was submitted to the DOE in December 2007. The first PDD version submitted by the PP and additional background documents related to the project design and baseline were reviewed to verify the correctness, credibility and interpretation of the presented information, furthermore a cross check between information provided and information from other sources (if available) have been done as initial step of the validation process. A complete list of all documents and proofs reviewed is attached as annex 2 to this report.

2.3 Follow-up Interviews

On 26 March 2008 year TÜV SÜD performed interviews and physical site inspection with project stakeholders to confirm relevant information and to resolve issues identified in the first document review. The table below provides a list of all persons interviewed in this context.

Name	Organisation
Mr. Yao Qiang	Xingtai Longhai Steel Group Co., Ltd
Mr. Zhao Yanwu	Xingtai Longhai Steel Group Co., Ltd
Miss Wang Jianfen	Xingtai Longhai Steel Group Co., Ltd
Miss Zhang Jianying	Xingtai Longhai Steel Group Co., Ltd
Mr. Duan Debiao	Xingtai Longhai Steel Group Co., Ltd
Mr. Cao Yuan	KOE Environmental Consulting, Inc. (Japan)
Miss Huang Zhifang	KOE Environmental Consulting, Inc. (Japan)

2.4 Further cross-check

During the validation process, the team makes reference to available information related to similar projects or technologies as the CDM project activity. The documentation has also been reviewed against the approved methodology/ies applied to confirm the appropriateness of formulae and correctness of calculations.

2.5 Resolution of Clarification and Corrective Action Requests

The objective of this phase of the validation is to resolve the requests for corrective actions and clarifications and any other outstanding issues which needed to be clarified for TÜV SÜD's conclusion on the project design. The CARs and CRs raised by TÜV SÜD were resolved during communication between the client and TÜV SÜD. To guarantee the transparency of the validation process, the concerns raised and responses that have been given are documented in more detail in the validation protocol in annex 1.

The final PDD version that was submitted in April 2009 serves as the basis for the final assessment presented herewith. Changes are not considered to be significant with respect to the qualification of the project as a CDM project based on the two main objectives of the CDM, i.e. to achieve a reduction of anthropogenic GHG emissions and to contribute to a sustainable development.

2.6 Internal Quality Control

As final step of a validation the final documentation including the validation report and the protocol have to undergo an internal quality control by the CB "climate and energy", i.e. each report has to be finally approved either by the head of the CB or the deputy. In case one of these two persons is part of the assessment team approval can only be given by the other one.

After confirmation of the PP the validation opinion and relevant documents are submitted to the EB through the UNFCCC web-platform.

3 SUMMARY

The assessment work and the main results are described below in accordance with the VVM reporting requirements. The reference documents indicated in this section and Annex 1 are stated in Annex 2.

3.1 Approval

The project participants are Xingtai Longhai Steel Group Co., Ltd. of People's Republic of China and PEAR Carbon Offset Initiative, Ltd. of Japan. The host Party China and further participant Parties Japan meet the requirements to participate in the CDM.

The DNA of the Japan has issued a LoA (IRL 47) on 11th December 2008 authorizing PEAR Carbon Offset Initiative, Ltd as a project participant. The DNA of China has also issued a LoA (IRL 46) on 25 June 2008 authorizing Xingtai Longhai Steel Group Co., Ltd. as a project participant. TÜV SÜD received these letters from the project participants directly and considers the provided letters as authentic.

The China LoA has further been double-checked with the CDM project webpage sponsored by the Department of Climate Change, NDRC (<http://cdm.ccchina.gov.cn>), which further confirming the approval of this CDM project.

Furthermore, after checking the provided LoAs, TÜV SÜD confirms that both letters refer to the precise proposed CDM project activity title in line with the title in the PDD "Hebei Wasted Gas based Captive Power Plant Project in Longgang Group".

Both letters also indicate that each participating Party is a Party to the Kyoto Protocol, and that the participation in the Hebei Wasted Gas based Captive Power Plant Project in Longgang Group project is voluntary. The Chinese LoA also confirms that the proposed CDM project activity contributes to the sustainable development of China (host country). Based on the information given in these letters, TÜV SÜD considers the approval as unconditional with respect to these items.

Both LoAs have been issued by the respective Party's DNA, National Development and Reform Commission of the People's Republic of China and Ministry of Economy, Trade and Industry of Japan. respectively.

TÜV SÜD considers the requirements of the VVM (§§ 45-48) to be complied with.

The LoA does not specify a version number of the PDD or validation report. The corresponding references included to LoA, PDD and validation report are consistent.

3.2 Participation

The participants of the project activity have been approved by the corresponding Parties, which is confirmed by the issued LoAs.

The means of validation were equivalent to those described in section 3.1 in regard to the approval process of the project activity.

3.3 Project design document

The PDD is compliant with relevant form and guidance as provided by UNFCCC.

The most recent version of the PDD form was used.

TÜV SÜD considers that the guidelines for the completion of the PDD in their most recent version have been followed. Relevant information has been provided by the participants in the applying PDD sections. Completeness was assessed through the checklist included to Annex 1 of this report.

3.4 Project description

The following description of the project as per PDD could be verified during the on-site audit:

The proposed project involves the set-up of two gas turbines, 12 MW each which will retrieve Blast Furnace Gas (BFG) and Waste Converter Gas (LDG) and produce electricity. Further two Top-Recovery-Turbines 3 MW each are planned to be installed. These will retrieve waste pressure to produce electricity. All produced electricity will be used in the plant for own purposes, no export to the grid will take place. Without the project activity the waste heat and pressure would have been released unused and the produced electricity would have been produced in the North China Power Grid (NCPG) by using fossil fuels. That is how emission reductions are generated. The estimated annual power production is estimated to be 196.2 GWh and the respective generated annual emission reductions 202,103 tCO₂ in a fixed crediting period of 10 years.

The information presented in the PDD on the technical design is consistent with the actual planning and implementation of the project activity as confirmed by:

- Review of data and information (see annex 2), cross check the same with other sources if available.
- An on-site visit has been performed and relevant stakeholder and personnel with knowledge of the project were interviewed, in case of doubt further cross checks through additional interviews have been done.
- Finally information related to similar projects or technologies as the CDM project activity have been used if available to confirm the accuracy and completeness of the project description.

In light of the above, TÜV SÜD confirms that the project description as included to the PDD is sufficiently accurate and complete in order to comply with the requirements of the CDM.

3.5 Baseline and monitoring methodology

3.5.1 Applicability of the selected methodology

Compliance with each applicability condition as listed in the chosen baseline and monitoring methodology ACM0012 Version 02 has been demonstrated.

The assessment was carried out for each applicability criteria and included among others the compliance check of the local project setting with the applicability conditions in regard to baseline setting and eligible project measures. This assessment also included the review of secondary sources which sustain that applicability conditions are complied with.

The Methodology specific protocol included to the Annex 1 documents the assessment process, including the steps taken. The results on the compliance check as well as the relevant evidence are explicitly presented in annex 1.

TÜV SÜD confirms that the chosen baseline and monitoring methodology is applicable to the project activity.

Emission sources which are not addressed by the applied methodology and which are expected to contribute more than 1% of the overall expected average annual emissions reduction have not been identified.

3.5.2 Project boundary

The project boundary was assessed in the context of physical site inspection, interviews and based on the secondary evidence received on the design of the project.

The project boundary includes the plant where waste heat and pressure are generated and also the whole North China Power Grid whose plants are connected with the project plant.

The most relevant documentation assessed in order to confirm the project boundary are following:

- Agreement of connection to grid with Xingtai supply power company, dated Dec. 18 2007 (IRL 16)
- The feedback about grid connection of the proposed project with Hebei province power company, dated on July 6 2007 (IRL 17)
- Feasibility Study Report of "Hebei Wasted Gas based Captive Power Plant Project in Longgang Group (IRL 7)

The same have been validated during the validation process using standard audit techniques, further details of any observation are transparently presented in the annex 1.

Hence TÜV SÜD confirms that the identified boundary and the selected sources and gases as documented in the PDD are justified for the project activity.

3.5.3 Baseline identification

In the PDD the following baseline scenario has been defined:

Since there is no waste gas production in the project activity baseline option W1 is excluded and W3 also excluded because waste heat cannot be sold as energy source. Option W2 waste heat released to the atmosphere is plausible and considered as option W4 that foresees that waste heat is used to meet energy demand. Among power generation options all are excluded due to a variety of reasons as non-existence of renewable sources, project is not co-generation, legal requirements prohibit the erection of fossil fired plants with this capacity. Option P1 (Proposed project activity not undertaken as a CDM project activity) and P6 (power from the grid) are correctly considered. All options regarding heat generation are not applicable and not discussed.

The only credible baseline scenario that has been defined and against which emission reductions were calculated is the release to the atmosphere of the waste heat and pressure without any use and the parallel delivery to the plant of electricity from the NCPG.

The information presented in the PDD has been validated by a first document review of all the data, further confirmation based on the on-site visit and a final step by cross checking the information with similar relevant projects and/or technologies. The sources referenced in the PDD have been quoted correctly. The information was cross-checked based on verifiable and credible sources, such as:

- Feasibility Study Report (FSR), dated on July of 2006, Hebei province Huabei metallurgy construction engineering design Co. Ltd. (IRL 7)
- Environmental Impact Assessment from Hebei Province Metallurgy Institut (IRL 9)
- Notice on Strictly Prohibiting the Installation of Fuel-fired Generators with the Capacity of 135 MW or Below issued by the General Office of the State Council, decree no. 2002-6 (IRL 31)
- ACM0012 version 2

TÜV SÜD has determined that no reasonable alternative scenario has been excluded.

Based on the validated assumptions on calculations TÜV SÜD considers that the identified baseline scenario is reasonable.

TÜV SÜD confirms that all relevant CDM requirements, including relevant and / or sectoral policies and circumstances, have been identified correctly taken into account in the definition of the baseline scenario.

A verifiable description of the baseline scenario has been included to the PDD.

In regard to item 86 of VVM, TÜV SÜD confirms that:

1. All the assumptions and data used by the project participants are listed in the PDD, including their references and sources;
2. All documentation used is relevant for establishing the baseline scenario and correctly quoted and interpreted in the PDD;
3. Assumptions and data used in the identification of the baseline scenario are justified appropriately, supported by evidence and can be deemed reasonable;
4. Relevant national and/or sectoral policies and circumstances are considered and listed in the PDD;
5. The approved baseline methodology has been correctly applied to identify the most reasonable baseline scenario and the identified baseline scenario reasonably represents what would occur in the absence of the proposed CDM project activity.

3.5.4 Algorithm and/or formulae used to determine emission reductions

TÜV SÜD has assessed the calculations of project emissions, baseline emissions and leakage and emission reductions. Corresponding calculations were carried out based on calculation spreadsheets. The parameters and equations presented in the PDD and further documentation have been compared with the information and requirements presented in the methodology and respective tools. The equation comparison has been made explicitly following all the formulae presented in the calculation files.

The assumptions and data used to determine the emission reductions are listed in the PDD and all the sources have been checked and confirmed.

Based on the information reviewed it can be confirmed that the sources used are correctly quoted and interpreted in the PDD.

The values presented in the PDD are considered reasonable based on the documentation reviewed, further references and the result of the interviews.

The baseline methodology has been correctly applied following the requirements.

The estimated of the baseline emissions can be confirmed as the same have been replicated by the audit team using the information provided.

Detailed information on the verification of the parameters used in the equations can be found in the annex 1. The algorithms for the determination of the baseline, project and leakage are discussed in the following sections.

3.5.4.1 Baseline Emissions

The calculation of the baseline emissions followed the procedures described in the methodology ACM0012 Version 02. The North China Power Grid is considered to be the project boundary.

The operating margin emission factor (EF_{OM}) was determined based on the simple OM method. The ex-ante option was chosen for this calculation. The calculation of the build margin emission factor (EF_{BM}) was based on modified methods agreed by the EB, because plant specific data are not available in China. The emission factor of the thermal power plants was calculated by the proportion of the emissions of coal, gas and oil times the emission factor of the best available coal, gas and oil power plant as defined and published by the Chinese DNA. The new thermal capacity installation that exceeded 20% in the last years, for which data was available, was finally assessed with this factor.

For the calculation of emissions capping factor f_{cap} version 3 of ACM012 has been applied.

The value for the combined margin emission factor (EF_{CM}) was determined using the weighted average of the EF_{BM} and EF_{OM} using the default values for the factors as described in the methodology (i.e. 0.5 for each emission factor). The values for the EF_{OM} and EF_{BM} were equal compared to the most recent values published by the Chinese DNA at the time of commencement of the validation of this project and are therefore accepted for the calculation of the baseline emissions and the emission reductions. The project takes under consideration the few project emissions that occur. There are no leakages. As a result, the annual emission reductions are calculated by deducting the project emissions from the baseline emissions.

3.5.5 Project emissions

There are project emissions from use of auxiliary fossil fuels (liquid acetylene C_2H_2) and due to electricity imports from the grid as a result of the project implementation. This supplementary fossil fuel consumption is used to ignite the waste gas during the start-up of the boiler. Their calculation is soundly presented in the respective chapter in PDD.

3.5.6 Leakage

Not applicable.

3.5.7 Emission Reductions

In summary, the calculation of the baseline emissions, project emissions and the emission reductions, respectively, can be considered as correct.

3.6 Additionality

The additionality of the project has been presented in the PDD using following approach: the latest version of the "Tool for the Demonstration and Assessment of Additionality" has been applied. Step 4 "Barrier Analysis" is discussed in PDD.

The approach use in the PDD has been assessed first based on a document review, where following relevant documents have been reviewed:

- IRR calculation excel sheet in English (IRL 18)
- FSR, dated on July of 2006, Hebei province Huabei metallurgy construction engineering design Co. Ltd.(IRL 7)
- The evidence of electricity tariff: invoice between Xingtai Longhai Steel Group Co., Ltd and Xingtai Longhai Steel Group generation electricity Co. Ltd, dated on Feb. 28 of 2008. The value is 0.438034188 (including tax) (IRL 27).

On site the additionality has been discussed principally with: Mr. Duan Debiao from Xingtai Longhai Steel Group Co., Ltd. Furthermore some documents have been reviewed on-site (for details see annex 2).

Finally the data, rationales, assumptions, justifications and documentation provided have been checked using local knowledge and sectoral and financial expertise, the same has been cross checked by:

- The investment agreement of the proposed project, dated on Oct. 2006. With Xingtai Xingli Group company, Xingtai Longhai Steel Group Co., Ltd, Neiqiu county Heng'an power Co. Ltd. And Handan city Wanxing Co. Ltd. (IRL 12)
- The loan evidences: Reply to Project Loan of Xingtai Longhai Steel Group Co., Ltd on "Waste Gas Based Power Plant Project", dated on August 17 2006. With China agriculture bank Xingtai branch. Dated on August 20 2006, China construction bank Xingtai branch. (IRL 14 and 15)
- Rejection for the application of the project loan from Agricultural Bank of China, dated on August 17 2006. Rejection for the application of the project loan from China construction bank, dated on August 20 2006 (IRL 437).
- The consulting contact of CDM project development (IRL 35)

Based on this validation steps we can confirm that the documentation assessed is appropriate for this project.

3.6.1 Prior consideration of the clean development mechanism

The starting date of the project activity is determined by the signing of the contract with the company which would deliver the generator. It took place on 7th of January 2007. In order to confirm the same the assessment team has reviewed the following documents:

- Meeting Minutes of CDM decision by the directors of the group (IRL 8)
- Purchasing contract of generation units with Shandong Ji'nan generation electricity devices plant, dated on Jan. 7 2007. (IRL 19)
- Purchasing contract of turbines with Shandong Qingdao energy saving turbines Co. Ltd. Dated on Jan. 9. 2007 (IRL 20)
- Purchasing contract of boilers with Wuxi Huaguang boiler Co. Ltd. Dated on Jan. 9 2007 (IRL 21)

Additionally the assessment team cross checked this information with Mr. Yao Qiang Xingtai from Longhai Steel Group Co., Ltd.

The starting date of the project activity is determined to be 7th of January 2007 which is before 02 August 2008 and also before the GSP. The PPs have presented to the assessment team following documentation:

Purchasing contracts for turbines, boilers and generators (IRL 19, 20, 21).

The original of the documentation presented has been reviewed and cross checked based on interviews with Mr. Yao Qiang Xingtai, hence the document can be considered appropriate to confirm the prior consideration. Additionally in order to confirm that the PPs have taken real actions to continue the activity as CDM, following timeline has been reviewed against the respective documents presented in the table below:

Activity	Document	Auditor conclusion
16/08/2005 CDM Decision	Meeting Minutes of CDM decision by the directors of the group (IRL 8)	
October 2006 Meeting between Longgang Group and other three investors	The investment agreement of the proposed project (IRL 12)	This was an act where the CDM scheme is clearly presented as the main focus.
01/01/2007 Equipment purchase	Purchasing contract of generation units with Shandong Ji'nan generation electricity devices plant, dated on Jan. 7 2007. (IRL 19) Purchasing contract of turbines with Shandong Qingdao energy saving turbines Co. Ltd. Dated on Jan. 9. 2007 (IRL 20) Purchasing contract of boilers with Wuxi Huaguang boiler Co. Ltd. Dated on Jan. 9 2007 (IRL 21)	An irreversible act that demonstrates the start of the project takes place on January 2007, which is one year before the GSP beginning.
20/01/2007 Board of directors	The first Meeting of the director board on: Longgang and other three investors agree on the Investment Protocol of Xingtai Longhai Steel Group Electricity Generation Co., Ltd. Appointment letter for longgang in CDM procedure (IRL 36)	On-going CDM is demonstrated by the designation of an employee who will serve as focal point for all issues that may arise regarding CDM. Longgang Group appoints a CDM responsible who will serve as coordinator for the proposed CDM project
29/12/2007	No.1 generator has been put into operation	Continuous CDM action is shown by the put in operation of the 1st generator of the project activity.
Several updating of the applied methodology and its versions	Each time that methodology is being updated the PDD has to be revised.	Continuous revisions of PDD constitutes on-going serious CDM consideration.
18/01/2008 Official GSP begins	See official web page of TÜV SÜD www.netinform.de	Start of validation work by TÜV SÜD also clearly indicates that CDM actions were still on-going.
20/01/2008 Agreement with credit buyer	Emissions Reduction Purchase Agreement is signed (IRL 41)	Another clear CDM activity takes place, as an agreement is signed with an entity which will buy the credits.

Hence the project complies with the requirements to demonstrate the prior consideration of the CDM.

3.6.2 Identifications of alternatives

The output of the project is electricity.

The list of alternatives to supply the outputs mentioned above, which is presented in the PDD includes the project activity undertaken without being registered as CDM project. The rest of the alternatives presented do include all plausible scenarios taking into account the local and sectoral situations for the outputs mentioned. Hence the list of alternatives is considered to be complete.

3.6.3 Investment analysis

The project developer applied during the validation process Step 2 of the additionality tool "Investment analysis". The check from TÜV SÜD concluded that the proposed project faces serious problems of additionality according to Step 2 requirements. A price was calculated for BFG and LDG, although both waste gases are a by-product of the industrial process and without the project they would be vented to the atmosphere. If these wrongly assumed costs are taken out from the calculation the project IRR exceeds the benchmark.

The project developer removed this step and proves the additionality of the project by applying the barrier analysis.

3.6.4 Barrier analysis

The project participants have used (also) the barrier analysis in order to demonstrate the additionality of the project. The presented barriers are:

- 1) Not enough equity funds available to finance the project.
- 2) Refusal from external funding institutions to provide the necessary funds
- 3) Technological barriers. The technological problem of the instability of gas delivery to the turbines requires the construction of a big gas tank. This expenditure is very big and would be overcome only via further financing which is not available.
- 4) Highly possible disorders in the function of TRT units due to poor conditions would require extra big investment. The necessary funds are not available.

The assessment team checked first if any barrier has a clear impact on the financial returns which can be expressed with reasonable certainty in monetary terms. The final PDD does include only barriers without such impact on the financial returns.

The financial barriers have been assessed against official documents from banks such as Rejection for the application of the project loan from Agricultural Bank of China, dated on August 17 2006 (IRL 37) and Rejection for the application of the project loan from China construction bank, dated on August 20 2006 (IRL 40). The technological barrier of disorders in the function of the TRT have been checked against "The cause to damage of TRT blade and preventive measures" (IRL 43). In China, blast furnaces can be classified into large-scale furnaces and small scale furnaces by the volume threshold of 1000m³ and there is radical distinction between them on the energy content of top pressure. The top pressure and the gas temperature of the small-scale blast furnace are much lower than the large-scale blast furnace. Furthermore, the capacity and steady operation of TRT installed in small-scale blast can not be compared to the ones installed in large-scale. Further TÜV SÜD was supplied with evidence that in year 2006, the Chinese government proposed that furnace below

1000m³ is not eligible to install TRT unit due to the fact that usually the top pressure is lower than the threshold value of 0.15 MPa. (The evidence was sent to the DOE as “Improper to install TRT on blast furnace below 1000m³”). According to the above mentioned applying TRT to small-scale blast furnace is difficult in technology and less financial attractive.

The result of this assessment shows clearly that the barrier presented in the PDD can be considered real.

This barrier does prevent the project activity and would not prevent at least the baseline of the project, this can be confirmed based on the documentation review, interviews and local and sectoral expertise of the assessment team. It is clearly indicated in the Feasibility Study that the production of electricity from fossil fuels in the grid does not face any investment barriers. The demonstration of “Lack of grants on the stability of gas supply on account that the extra expenditure to build a gas tank is very high” is based on the face-to-face conversation with the engineers from Longgang Group and Jinan Iron & Steel Co., Ltd.

Taken into account the description of the validation of the barriers presented above, the assessment team can confirm with reasonable certainty that the barriers are credible and correctly presented to demonstrate the additionality of the project.

3.6.5 Common practice analysis

The region for the common practice analysis has been defined as Hebei province. The project activity's technology can be found in different country regions, where different situations can appear. Hence the region has been defined taken into account the kind of technology and the industry type. The assessment team has revised the approach presented in the PDD and can confirm that the relevant parameters as location, infrastructure, economical situation and development has been taken into account in order to define the region to be used for the common practice. The province of Hebei has the biggest number of steel enterprises in China and that qualifies the province as an adequate geographical region since it provides a very representative sample of plants and applied technology. Hence the presented region can be considered appropriate for the common practice analysis.

The assessment team has revised official sources as “The data sources about common practice analysis, from the Hebei province EPB website” (IRL 54). This information confirms that the list of similar projects presented in the PDD is complete. Additionally the team made a further cross check of the information based on the interviews.

All the similar projects that are not a CDM project have been checked firstly by a review of all documentation available (See annex 2), furthermore the essential distinctions between these projects and the CDM project under validation have been confirmed using as source of information the official publications of Hebei province.

Hence it can be confirmed that the proposed CDM activity is not a common practice in the defined region.

3.7 Monitoring plan

The monitoring plan presented in the PDD complies with the requirement of the methodology. The assessment team has checked all the parameters presented in the monitoring plan against the requirements of the methodology; no deviations relevant for the project activity have been found in the plan.

The procedures have been revised by the assessment team through document review and interviews with the relevant personnel; this information together with a physical inspection allows the assessment team to confirm that the proposed monitoring plan is feasible within the project design.

The major parameters to be monitored have been discussed with the PPs especially regarding the location of the meters, the data management and in general the quality assurance and quality control procedures to be implemented in the context of the project. The produced electricity from the four turbines (two that work with gas and the two TRT) will be measured through four main digital bidirectional ammeters. Another four will be stand-by. The four stand by will work as back-up meters, in case of failure at the first four. The monitoring plan has been checked against:

- The calibration certificate for electricity meter, type SL7000, No. 2007-1287 (IRL 28)
- The calibration certificate for electricity meter, type SL7000, No. 2007-1268 (IRL 29)

Hence it is expected that the PPs will be able to implement the monitoring plan and the emission reductions achieved can be reported ex-post and verified.

3.8 Sustainable development

The LoA of the Host country clearly present a statement that the project contributes to the sustainable development of the host Party.

3.9 Local stakeholder consultation

The relevant local stakeholders have been invited via survey that was sent out to local residents. The evidence of these invitations is IRL 22. The assessment team has reviewed the documentation in order to validate the inclusion of relevant stakeholders and using the local expertise can confirm that the communication method used to invite the stakeholders can be considered appropriate. The summary of comments presented in the PDD has been cross checked with the documentation of the stakeholder consultation and it is found to be complete.

The relevant comments presented by the local stakeholders have been taken due account by the PP, the same has been cross checked with the information obtained during the interviews.

Hence the local stakeholder consultation has been adequately performed according to the CDM requirements.

3.10 Environmental impacts

The project participants undertake an environmental impact assessment. The assessment team made a document review of the information presented. The IRL 9 Environmental Impact Assessment dated on 29/08/2005 by Hebei province metallurgy institute and the approval of EIA, dated on 2005/09/05 by Hebei province EPB confirm the correctness of the approach used by the PPs. Hence the PPs followed the requirements of the host country regarding the environmental impacts.

4 COMMENTS BY PARTIES, STAKEHOLDERS AND NGOS

TÜV SÜD published the project documents on UNFCCC website by installing a link to TÜV SÜD's own website and invited comments by Parties, stakeholders and non-governmental organisations during a period of 30 days.

The following table presents all key information on this process:

webpage: http://www.netinform.de/KE/Wegweiser/Guide2_1.aspx?ID=4316&Ebene1_ID=26&Ebene2_ID=1306&mode=1	
Starting date of the global stakeholder consultation process: 2008-01-18	
Comment submitted by: longyan69 [longyan69@163.com]	Issues raised: In the financial analysis, O&M cost (52.06 Million RMB) is about 1/3 of total investment (159.50 Million RMB). This is extremely high and against economic assessment common practice in China. How did the design institute conclude this cost?
Response by TÜV SÜD: A detailed break-down of the O&M costs is presented in PDD in the chapter where additionality is discussed and in the Feasibility Study chapter 6.	
The above mentioned comment refers to the investment analysis which has been conducted according to the Additionality tool version 5. Nevertheless, this step has been deleted from the PDD and the additionality has been proved by the barrier analysis. As a consequence of that this comment is no more relevant.	

VALIDATION OPINION

TÜV SÜD has performed a validation of the following proposed CDM project activity:

Hebei Wasted Gas based Captive Power Plant Project in Longgang Group

Standard auditing techniques have been used for the validation of the project. Methodology-specific checklists and protocol customised for the project have been prepared to carry out the audit and present the outcome in a transparent and comprehensive manner.

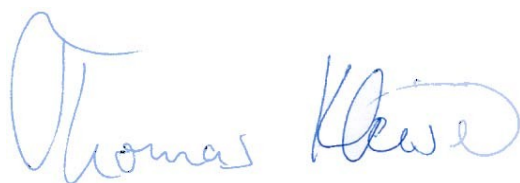
The review of the project design documentation, the subsequent follow-up interviews and the further cross check of references have provided TÜV SÜD with sufficient evidence to determine the fulfilment of stated criteria in the protocol. In our opinion, the project meets all relevant UNFCCC requirements for the CDM. Hence TÜV SÜD will recommend the project for registration by the CDM Executive Board.

An analysis as provided by the applied methodology demonstrates that the proposed project activity is not a likely baseline scenario. Emission reductions attributable to the project are hence additional to any that would occur in the absence of the project activity. Given that the project is implemented as designed, the project is likely to achieve the estimated amount of emission reductions as specified within the final PDD version.

The validation is based on the information made available to us and the engagement conditions detailed in this report. The validation has been performed following the VVM requirements. The only purpose of this report is its use during the registration process as part of the CDM project cycle. Hence, TÜV SÜD can not be held liable by any party for decisions made or not made based on the validation opinion, which will go beyond that purpose.

Munich, 15-04-2009

Munich, 15-04-2009



Certification Body "climate and energy"
TÜV SÜD Industrie Service GmbH



Assessment Team Leader

Validation of the CDM Project:
Hebei Wasted Gas based Captive Power Plant Project in Longgang Group



Industrie Service

Annex 1: Validation Protocol

Validation Protocol

Project Title: Hebei Wasted Gas based Captive Power Plant Project in Longgang Group

Date of Completion: 15th April 2009

Number of Pages: 64



Industrie Service

CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	PDD in GSP	Final PDD
A. General description of project activity				
A.1. Title of the project activity				
A.1.1. Does the used project title clearly enable to identify the unique CDM activity?	1, 2	Yes. The project title is named with the type of energy, the location and the project owner, It can be identified clearly. The proposed project title is Hebei Wasted Gas based Captive Power Plant Project in Longgang Group.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
A.1.2. Are there any indication concerning the revision number and the date of the revision?	1, 2	Yes. The version number of the PDD is 01, dated on 10/12/2007. This version is also for GSP version. The period for comments is 18 Jan 08 - 16 Feb 08	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
A.1.3. Is this consistent with the time line of the project's history?	1,2	Yes. They are consistent. The starting construction date of the project is on Jan. 2007, and the starting operation date is on Dec. 5 of 2007.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
A.2. Description of the project activity				
A.2.1. Is the description delivering a transparent overview of the project activities?	1,2	Yes. The energy source, installed capacity, the project owner, location, brief utilization process, brief presentation about Longgang group is described in this section. Through these description we can get a transparent overview of the proposed project. <u>Corrective Action Request No.1.</u> The planned BF No. 5&6 are not part of the proposed project activity. They should be taken out of the PDD.	CAR1	<input checked="" type="checkbox"/>
A.2.2. What proofs are available demonstrating that the project description is in compliance with the actual situation or planning?	1,2, 6, 7, 8, 9, 11, 12, 13, 14,	The following proofs are available: Business license, The investment plan, The investment agreement, the FSR, the approval certificate of utilizing blast furnace gas for generation, EIA and its approval, The eligibility notification of check and accept for BFG 12MW generation units, Supervision work summarizing report of 12MW Waste Gas based power plant	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Validation Protocol

Project Title: Hebei Wasted Gas based Captive Power Plant Project in Longgang Group

Date of Completion: 15th April 2009

Number of Pages: 64



Industrie Service

CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	PDD in GSP	Final PDD
	16, 30			
A.2.3. Is the information provided by these proofs consistent with the information provided by the PDD?	1,2, 6, 7, 16	Clarification Request No. 1. During audit on site, there are several project participants, like Xingtai Longhai Steel Group Co., Ltd, Xingtai Longhai Steel Group generation electricity Co. Ltd, Xingtai Xingli Group company, Neiqiu county Heng'an power Co. Ltd. And Handan city Wanxing Co. Ltd. Please clarify what is their relationship clearly in the PDD. And revise the associated information in A.2 and Annex 1, as the actual project owner should be Xingtai Longhai Steel Group generation electricity Co. Ltd,	CR1	<input checked="" type="checkbox"/>
A.2.4. Is all information presented consistent with details provided by further chapters of the PDD?	1,2	Clarification Request No. 2. What is also not clear, why are 2.7 MW needed for self-consumption. Are these 2.7 MW part of the 6 MW going to Longgang or are they extra?	CR2	<input checked="" type="checkbox"/>
A.3. Project participants				
A.3.1. Is the form required for the indication of project participants correctly applied?	1,2	Yes the form is correctly applied.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
A.3.2. Is the participation of the listed entities or Parties confirmed by each one of them?	1,2 46 , 47 , 48	The project owner is indicated as Xingtai Longhai Steel Group Co., Ltd.. but see CR 1. The investor is PEAR Carbon Offset Initiative, Ltd from Japan. Open Issue: Pls. deliver the LoA issued by China and the DNA of investment party, as well as the MoC countersigned by both parties to the DOE before raising the request for registration.	Open issue	<input checked="" type="checkbox"/>
A.3.3. Is all information on participants / Parties provided in consistency with details provided by further chapters of the PDD (in par-	1,2	Yes. All information provided in the PDD could be consistent.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Validation Protocol

Project Title: Hebei Wasted Gas based Captive Power Plant Project in Longgang Group

Date of Completion: 15th April 2009

Number of Pages: 64



Industrie Service

CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	PDD in GSP	Final PDD
ticular annex 1)?				
A.4. Technical description of the project activity				
<i>A.4.1. Location of the project activity</i>				
A.4.1.1.Does the information provided on the location of the project activity allow for a clear identification of the site(s)?	1,2	<p>The name of the location and the detailed geographical coordinates of the project activity are provided in this section. It's located in economic development area in Neiqiu County, Xingtai City, Hebei Province, China. The detailed geographical coordinates is longitude of 114°32 '14" and latitude 37°15'50".</p> <p><u>Corrective Action Request No.2.</u></p> <p>In order to understand better for international readers, the map in English is required.</p> <p>In the project description must be added also the gas tank of 80,000 m3 and this tank must be evaluated because it plays an important role in the financial analysis in B.5.</p>	CAR2	<input checked="" type="checkbox"/>
A.4.1.2.How is it ensured and/or demonstrated, that the project proponents can implement the project at this site (ownership, licenses, contracts etc.)?	1,2, 6, 7, 8, 9, 11, 12, 13, 16, 22, 23, 24, 30	<p>The following proofs are available:</p> <p>The business license, The investment plan, The investment agreement, the FSR, the approval certificate of utilizing blast furnace gas for generation, EIA and its approval, Supervision work summarizing report of 12MW Waste Gas based power plant, and the devices purchasing contract.</p>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<i>A.4.2. Category(ies) of project activity</i>				
A.4.2.1.To which category(ies) does the project	1,2	This category would fall within sectoral scope 1: Energy indus-	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Validation Protocol

Project Title: Hebei Wasted Gas based Captive Power Plant Project in Longgang Group

Date of Completion: 15th April 2009

Number of Pages: 64



Industrie Service

CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	PDD in GSP	Final PDD
activity belonging to? Is the category correctly identified and indicated?		tries; 4: Manufacturing industries		
A.4.3. Technology to be employed by the project activity				
A.4.3.1.Does the technical design of the project activity reflect current good practices?	1,2	FSR was written by Hebei province Huabei metallurgy construction engineering design Co. Ltd which has the first class qualification certificate for metallurgy industry design.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
A.4.3.2.Does the description of the technology to be applied provide sufficient and transparent input/ information to evaluate its impact on the greenhouse gas balance?	1,2	Yes. The objectives of the project are to recovery the waste resource in iron-and-steel-making process to generating lower-emission electricity that displaces the purchased grid power, thus avoiding CO2 emissions from the business-as-usual scenario electricity generation form the fossil fuel dominantly North China Power Grid (NCPG).	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
A.4.3.3.Does the implementation of the project activity require any technology transfer from annex-I-countries to the host country(ies)?	1,2	All the equipment adopted by the proposed project is manufactured domestically in China, no direct technology transferring from ANNEX I Parties involved.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
A.4.3.4.Is the technology implemented by the project activity environmentally safe?	1,2 , 13	According to the results of EIA of the proposed project, the technology implemented by the project activity is environmentally safe.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
A.4.3.5.Is the information provided in compliance with actual situation or planning?	1,2, 8, 14	<p>No. During on site audit, only one 12MW Waste Gas based power plant has been established. And the starting operation date is Dec. 26 of 2007. The other project 12MW Waste Gas based power plant and the 2*3MW TRT project are not installed yet and there is no a detailed schedule for them.</p> <p><u>Corrective Action Request No.3.</u></p> <p>There is an inconsistent description in the FSR. The completed date of FSR is indicated on July 1 of 2006. But in the content of FSR, the page 5, the planned construction period is from March of 2005 to Feb. of 2006. Please clarify this issue.</p>	CAR3	<input checked="" type="checkbox"/>

Validation Protocol

Project Title: Hebei Wasted Gas based Captive Power Plant Project in Longgang Group

Date of Completion: 15th April 2009

Number of Pages: 64



Industrie Service

CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	PDD in GSP	Final PDD
		The value of 34.2 GWh are energy and not power. Please correct it in the PDD.		
A.4.3.6.Does the project use state of the art technology and / or does the technology result in a significantly better performance than any commonly used technologies in the host country?	1,2	Yes, Currently common practice for waste gas from BFG is flared directly, Hence the proposed project can result in a significantly better performance than any commonly in China.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
A.4.3.7.Is the project technology likely to be substituted by other or more efficient technologies within the project period?	1,2	No. As all the devices are installed recently. And under normal situation the project operation period is longer than the project period. Hence the project technology is not likely to be substituted.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
A.4.3.8.Does the project require extensive initial training and maintenance efforts in order to be carried out as scheduled during the project period?	1,2	Yes. The project requires extensive initial training and maintenance efforts, as for the operation and maintenance the professional technical is required.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
A.4.3.9.Is information available on the demand and requirements for training and maintenance?	1,2	The project owner trained the employees. The training plan and materials have been reviewed by the local auditor during on site audit.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
A.4.3.10. Is a schedule available for the implementation of the project and are there any risks for delays?	1,2 , 40, 41, 42	<u>Corrective Action Request No.4.</u> Please describe a detailed timeline of the proposed project in the PDD. It includes all the important events, i.e. the date of consideration CDM, FSR and its approval, EIA and its approval, the project confirmation by authorized government, the date of purchase contract for main devices, the date of starting construction and the date of operation or planned if applicable. All components of the proposed project should be included.	CAR4	<input checked="" type="checkbox"/>
A.4.4. Estimated amount of emission reductions over the chosen crediting period				
A.4.4.1.Is the form required for the indication of	1,2	Yes. The form is correctly applied.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Validation Protocol

Project Title: Hebei Wasted Gas based Captive Power Plant Project in Longgang Group

Date of Completion: 15th April 2009

Number of Pages: 64



Industrie Service

CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	PDD in GSP	Final PDD
projected emission reductions correctly applied?				
A.4.4.2. Are the figures provided consistent with other data presented in the PDD?	1,2	Yes. The figures provided in A.4.4, B.6.3 and B.6.4 are consistent. <u>Corrective Action Request No.5.</u> Please provide the operational lifetime of the project equipment	CAR5	<input checked="" type="checkbox"/>
A.4.5.				
A.4.5.1. Is the information provided on public funding provided in compliance with the actual situation or planning as available by the project participants?	1,2	There is no public funding from Annex I Parties for this Project. The capital source should be provided.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
A.4.5.2. Is all information provided consistent with the details given in remaining chapters of the PDD (in particular annex 2)?	1,2	Yes. In Annex 2 the same information is provided.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
B. Application of a baseline and monitoring methodology				
B.1. Title and reference of the approved baseline and monitoring methodology				
B.1.1 Are reference number, version number, and title of the baseline and monitoring methodology clearly indicated?	1,2	Yes. The following documents have been applied for the proposed project. 1. ACM0012 (version 02) – “Consolidated baseline methodology for GHG emission reductions for waste gas or waste heat or waste pressure based energy system”. 2. The Tool to calculate the emission factor for an electricity system (version 1) 3. The Tool for the Demonstration and Assessment of Additionality (version 4). Also see CAR 6	CAR6	<input checked="" type="checkbox"/>
B.1.2. Is the applied version the most recent one	1,2	Yes. ACM0012 (version 02) is the most recent one and valid from	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Validation Protocol

Project Title: Hebei Wasted Gas based Captive Power Plant Project in Longgang Group

Date of Completion: 15th April 2009

Number of Pages: 64



Industrie Service

CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	PDD in GSP	Final PDD								
and / or is this version still applicable?		02 Nov 07 onwards										
B.2. Justification of the choice of the methodology and why it is applicable to the project activity												
B.2.1 Is the applied methodology considered the most appropriate one?	1,2	Yes. The objective of the proposed project activity is to utilize waste gas and waste pressure as an energy source for electricity generation. Hence it is considered the appropriate one.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>								
B.2.2 Criterion 1: The applicability is limited to project activities that utilize waste gas and/or waste heat as an energy source for: - cogeneration or - generation of electricity or - direct use as process heat source or - for generation of heat in element processes (e. g. steam, hot water, hot oil, hot air) and that also use waste pressure: - to generate electricity.	1,2	<table><tr><td>Applicability checklist</td><td>Yes / No</td></tr><tr><td>Criterion discussed in the PDD?</td><td>Yes</td></tr><tr><td>Compliance provable?</td><td>Yes</td></tr><tr><td>Compliance verified?</td><td>Yes</td></tr></table>	Applicability checklist	Yes / No	Criterion discussed in the PDD?	Yes	Compliance provable?	Yes	Compliance verified?	Yes	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Applicability checklist	Yes / No											
Criterion discussed in the PDD?	Yes											
Compliance provable?	Yes											
Compliance verified?	Yes											
B.2.3. Criterion 2: Cogeneration of energy is from combined heat and power and not from combined cycle mode of electricity generation.	1,2	<table><tr><td>Applicability checklist</td><td>Yes / No</td></tr><tr><td>Criterion discussed in the PDD?</td><td>Yes</td></tr><tr><td>Compliance provable?</td><td>Yes</td></tr><tr><td>Compliance verified?</td><td>Yes</td></tr></table>	Applicability checklist	Yes / No	Criterion discussed in the PDD?	Yes	Compliance provable?	Yes	Compliance verified?	Yes	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Applicability checklist	Yes / No											
Criterion discussed in the PDD?	Yes											
Compliance provable?	Yes											
Compliance verified?	Yes											
B.2.4. Criterion 3: Waste gas/heat/pressure is a by-product of machines and/or technical processes for which no useful application is found, which has not been used prior to and would not be used in absence of the CDM project activity.	1,2	<table><tr><td>Applicability checklist</td><td>Yes / No</td></tr><tr><td>Criterion discussed in the PDD?</td><td>Yes</td></tr><tr><td>Compliance provable?</td><td>Yes</td></tr><tr><td>Compliance verified?</td><td>Yes</td></tr></table>	Applicability checklist	Yes / No	Criterion discussed in the PDD?	Yes	Compliance provable?	Yes	Compliance verified?	Yes	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Applicability checklist	Yes / No											
Criterion discussed in the PDD?	Yes											
Compliance provable?	Yes											
Compliance verified?	Yes											

Validation Protocol

Project Title: Hebei Wasted Gas based Captive Power Plant Project in Longgang Group

Date of Completion: 15th April 2009

Number of Pages: 64



Industrie Service

CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS		PDD in GSP	Final PDD								
B.2.5. Criterion 4: The project activity is use of waste pressure to generate electricity and the electricity generated using waste gas pressure should be measurable.	1,2	<table><tr><td>Applicability checklist</td><td>Yes / No</td></tr><tr><td>Criterion discussed in the PDD?</td><td>Yes</td></tr><tr><td>Compliance provable?</td><td>Yes</td></tr><tr><td>Compliance verified?</td><td>Yes</td></tr></table>		Applicability checklist	Yes / No	Criterion discussed in the PDD?	Yes	Compliance provable?	Yes	Compliance verified?	Yes	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Applicability checklist	Yes / No												
Criterion discussed in the PDD?	Yes												
Compliance provable?	Yes												
Compliance verified?	Yes												
B.2.6. Criterion 5: The energy/electricity generated in the project activity - may be used within the industrial facility or - exported outside the industrial facility or - may be exported to the grid.	1,2	<table><tr><td>Applicability checklist</td><td>Yes / No</td></tr><tr><td>Criterion discussed in the PDD?</td><td>Yes</td></tr><tr><td>Compliance provable?</td><td>Yes</td></tr><tr><td>Compliance verified?</td><td>Yes</td></tr></table>		Applicability checklist	Yes / No	Criterion discussed in the PDD?	Yes	Compliance provable?	Yes	Compliance verified?	Yes	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Applicability checklist	Yes / No												
Criterion discussed in the PDD?	Yes												
Compliance provable?	Yes												
Compliance verified?	Yes												
B.2.7. Criterion 6: The energy in the project activity can be generated - by the owner of the industrial facility producing the waste gas/heat or - by a third party within the industrial facility.	1,2	<table><tr><td>Applicability checklist</td><td>Yes / No</td></tr><tr><td>Criterion discussed in the PDD?</td><td>Yes</td></tr><tr><td>Compliance provable?</td><td>Yes</td></tr><tr><td>Compliance verified?</td><td>Yes</td></tr></table>		Applicability checklist	Yes / No	Criterion discussed in the PDD?	Yes	Compliance provable?	Yes	Compliance verified?	Yes	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Applicability checklist	Yes / No												
Criterion discussed in the PDD?	Yes												
Compliance provable?	Yes												
Compliance verified?	Yes												
B.2.8. Criterion 7: Before implementing the project activity no regulations constrained the industrial facility to generate waste gas from using fossil fuels.	1,2	<table><tr><td>Applicability checklist</td><td>Yes / No</td></tr><tr><td>Criterion discussed in the PDD?</td><td>Yes</td></tr><tr><td>Compliance provable?</td><td>Yes</td></tr><tr><td>Compliance verified?</td><td>Yes</td></tr></table>		Applicability checklist	Yes / No	Criterion discussed in the PDD?	Yes	Compliance provable?	Yes	Compliance verified?	Yes	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Applicability checklist	Yes / No												
Criterion discussed in the PDD?	Yes												
Compliance provable?	Yes												
Compliance verified?	Yes												
B.2.9. Criterion 8: If capacity expansion of an existing facility is planned the added capacity must be treated as a new facility.	1,2	<table><tr><td>Applicability checklist</td><td>Yes / No</td></tr><tr><td>Criterion discussed in the PDD?</td><td>Yes</td></tr><tr><td>Compliance provable?</td><td>Yes</td></tr><tr><td>Compliance verified?</td><td>Yes</td></tr></table>		Applicability checklist	Yes / No	Criterion discussed in the PDD?	Yes	Compliance provable?	Yes	Compliance verified?	Yes	CR3	<input checked="" type="checkbox"/>
Applicability checklist	Yes / No												
Criterion discussed in the PDD?	Yes												
Compliance provable?	Yes												
Compliance verified?	Yes												

Validation Protocol

Project Title: Hebei Wasted Gas based Captive Power Plant Project in Longgang Group

Date of Completion: 15th April 2009

Number of Pages: 64



Industrie Service

CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	PDD in GSP	Final PDD								
		Clarification Request No. 3. Please clarify if a capacity expansion of an existing facility is planned.										
B.2.10. Criterion 9: Either one of the following proofs shall be given if the waste gas/pressure utilized in the project activity was flared or released into the atmosphere in absence of the project at an existing facility: <ul style="list-style-type: none">• direct measurements of energy content and amount of the waste gas for at least 3 years prior to the start of the project activity or• energy balance of relevant sections of the plant to indicate that the waste gas/heat was not a source of energy before the implementation of the project activity or• energy bills to demonstrate that all the energy required for the process has been procured commercially• significant manufacturer's documents from the construction of the facility for estimating quantity and energy content of waste gas/heat produced for rated plant capacity/per unit of product produced• onsite check by the DOE that no equipment for waste gas recovery and	1,2	<table><tr><th>Applicability checklist</th><th>Yes / No</th></tr><tr><td>Criterion discussed in the PDD?</td><td>Yes</td></tr><tr><td>Compliance provable?</td><td>Yes</td></tr><tr><td>Compliance verified?</td><td>Yes</td></tr></table>	Applicability checklist	Yes / No	Criterion discussed in the PDD?	Yes	Compliance provable?	Yes	Compliance verified?	Yes	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Applicability checklist	Yes / No											
Criterion discussed in the PDD?	Yes											
Compliance provable?	Yes											
Compliance verified?	Yes											

Validation Protocol

Project Title: Hebei Wasted Gas based Captive Power Plant Project in Longgang Group

Date of Completion: 15th April 2009

Number of Pages: 64



Industrie Service

CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS		PDD in GSP	Final PDD										
use has been installed prior to the implementation of the project activity.															
B.2.11. Criterion 10: The credits are claimed by the generator of energy using waste gas/heat/pressure in consideration of: <ul style="list-style-type: none">energy exported to other facilities (recipients) which shall not claim the emission reductions for using a zero-emission energy source orfacilities and recipients included in the project boundary generated energy on site prior to implementation of the project activity which can claim credits for the remaining lifetime of equipments currently used and credit period.	1,2	<table><tr><td>Applicability checklist</td><td>Yes / No</td></tr><tr><td>Criterion discussed in the PDD?</td><td>Yes</td></tr><tr><td>Compliance provable?</td><td>Yes</td></tr><tr><td>Compliance verified?</td><td>Yes</td></tr></table>		Applicability checklist	Yes / No	Criterion discussed in the PDD?	Yes	Compliance provable?	Yes	Compliance verified?	Yes	☑	☑		
Applicability checklist	Yes / No														
Criterion discussed in the PDD?	Yes														
Compliance provable?	Yes														
Compliance verified?	Yes														
B.3. Description of the sources and gases included in the project boundary															
B.3.1. Source: electricity generation, grid or captive source Description of Source: main emission Gas(es): CO ₂ Type: Baseline Emissions	1,2	<table><tr><td>Boundary checklist</td><td>Yes / No</td></tr><tr><td>Source and gas(es) discussed in the PDD?</td><td>Yes</td></tr><tr><td>Inclusion / exclusion justified?</td><td>Yes</td></tr><tr><td>Explanation / Justification sufficient?</td><td>Yes</td></tr><tr><td>Consistency with monitoring plan?</td><td>Yes</td></tr></table>		Boundary checklist	Yes / No	Source and gas(es) discussed in the PDD?	Yes	Inclusion / exclusion justified?	Yes	Explanation / Justification sufficient?	Yes	Consistency with monitoring plan?	Yes	☑	☑
Boundary checklist	Yes / No														
Source and gas(es) discussed in the PDD?	Yes														
Inclusion / exclusion justified?	Yes														
Explanation / Justification sufficient?	Yes														
Consistency with monitoring plan?	Yes														
B.3.2. Source: fossil fuel consumption in boiler for thermal energy Description of Source: main emission Gas(es): CO ₂ Type: Baseline Emissions	1,2	<table><tr><td>Boundary checklist</td><td>Yes / No</td></tr><tr><td>Source and gas(es) discussed in the PDD?</td><td>NA</td></tr><tr><td>Inclusion / exclusion justified?</td><td>NA</td></tr><tr><td>Explanation / Justification sufficient?</td><td>NA</td></tr><tr><td>Consistency with monitoring plan?</td><td>NA</td></tr></table>		Boundary checklist	Yes / No	Source and gas(es) discussed in the PDD?	NA	Inclusion / exclusion justified?	NA	Explanation / Justification sufficient?	NA	Consistency with monitoring plan?	NA	☑	☑
Boundary checklist	Yes / No														
Source and gas(es) discussed in the PDD?	NA														
Inclusion / exclusion justified?	NA														
Explanation / Justification sufficient?	NA														
Consistency with monitoring plan?	NA														

Validation Protocol

Project Title: Hebei Wasted Gas based Captive Power Plant Project in Longgang Group

Date of Completion: 15th April 2009

Number of Pages: 64



Industrie Service

CHECKLIST TOPIC / QUESTION		Ref.	COMMENTS	PDD in GSP	Final PDD										
			There is no boiler for thermal energy. .												
B.3.3.	Source: fossil fuel consumption in co-generation plant Description of Source: main emission Gas(es): CO2 Type: Baseline Emissions	1,2	<table><tr><td>Boundary checklist</td><td>Yes / No</td></tr><tr><td>Source and gas(es) discussed in the PDD?</td><td>NA</td></tr><tr><td>Inclusion / exclusion justified?</td><td>NA</td></tr><tr><td>Explanation / Justification sufficient?</td><td>NA</td></tr><tr><td>Consistency with monitoring plan?</td><td>NA</td></tr></table> There is no cogeneration plant.	Boundary checklist	Yes / No	Source and gas(es) discussed in the PDD?	NA	Inclusion / exclusion justified?	NA	Explanation / Justification sufficient?	NA	Consistency with monitoring plan?	NA	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Boundary checklist	Yes / No														
Source and gas(es) discussed in the PDD?	NA														
Inclusion / exclusion justified?	NA														
Explanation / Justification sufficient?	NA														
Consistency with monitoring plan?	NA														
B.3.4.	Source: Baseline emissions from generation of steam used in the flaring process Description of Source: main emission Gas(es): CO2 Type: Baseline Emissions	1,2	<table><tr><td>Boundary checklist</td><td>Yes / No</td></tr><tr><td>Source and gas(es) discussed in the PDD?</td><td>Yes</td></tr><tr><td>Inclusion / exclusion justified?</td><td>Yes</td></tr><tr><td>Explanation / Justification sufficient?</td><td>Yes</td></tr><tr><td>Consistency with monitoring plan?</td><td>Yes</td></tr></table>	Boundary checklist	Yes / No	Source and gas(es) discussed in the PDD?	Yes	Inclusion / exclusion justified?	Yes	Explanation / Justification sufficient?	Yes	Consistency with monitoring plan?	Yes	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Boundary checklist	Yes / No														
Source and gas(es) discussed in the PDD?	Yes														
Inclusion / exclusion justified?	Yes														
Explanation / Justification sufficient?	Yes														
Consistency with monitoring plan?	Yes														
B.3.5.	Source: supplemental fossil fuel consumption at the project plant Description of Source: main emission Gas(es): CO2 Type: Project Emissions	1,2	<table><tr><td>Boundary checklist</td><td>Yes / No</td></tr><tr><td>Source and gas(es) discussed in the PDD?</td><td>Yes</td></tr><tr><td>Inclusion / exclusion justified?</td><td>Yes</td></tr><tr><td>Explanation / Justification sufficient?</td><td>Yes</td></tr><tr><td>Consistency with monitoring plan?</td><td>Yes</td></tr></table> Clarification Request No. 4. Why is C2H2 excluded? Was it also before the project activity used somewhere else in the facility? If yes, where exactly?	Boundary checklist	Yes / No	Source and gas(es) discussed in the PDD?	Yes	Inclusion / exclusion justified?	Yes	Explanation / Justification sufficient?	Yes	Consistency with monitoring plan?	Yes	CR4	<input checked="" type="checkbox"/>
Boundary checklist	Yes / No														
Source and gas(es) discussed in the PDD?	Yes														
Inclusion / exclusion justified?	Yes														
Explanation / Justification sufficient?	Yes														
Consistency with monitoring plan?	Yes														
B.3.6.	Source: supplemental electricity consumption Description of Source: main emission Gas(es): CO2	1,2	<table><tr><td>Boundary checklist</td><td>Yes / No</td></tr><tr><td>Source and gas(es) discussed in the PDD?</td><td>Yes</td></tr><tr><td>Inclusion / exclusion justified?</td><td>Yes</td></tr></table>	Boundary checklist	Yes / No	Source and gas(es) discussed in the PDD?	Yes	Inclusion / exclusion justified?	Yes	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				
Boundary checklist	Yes / No														
Source and gas(es) discussed in the PDD?	Yes														
Inclusion / exclusion justified?	Yes														

Validation Protocol

Project Title: Hebei Wasted Gas based Captive Power Plant Project in Longgang Group

Date of Completion: 15th April 2009

Number of Pages: 64



Industrie Service

CHECKLIST TOPIC / QUESTION		Ref.	COMMENTS		PDD in GSP	Final PDD										
Type: Project Emissions			<table><tr><td>Explanation / Justification sufficient?</td><td>Yes</td></tr><tr><td>Consistency with monitoring plan?</td><td>Yes</td></tr></table>		Explanation / Justification sufficient?	Yes	Consistency with monitoring plan?	Yes								
Explanation / Justification sufficient?	Yes															
Consistency with monitoring plan?	Yes															
B.3.7.	Source: emissions from cleaning of gas Description of Source: only in case waste gas cleaning is required and leads to emissions related to the energy requirement of the cleaning Gas(es): CO2 Type: Project Emissions	1,2	<table><tr><td>Boundary checklist</td><td>Yes / No</td></tr><tr><td>Source and gas(es) discussed in the PDD?</td><td>NA</td></tr><tr><td>Inclusion / exclusion justified?</td><td>NA</td></tr><tr><td>Explanation / Justification sufficient?</td><td>NA</td></tr><tr><td>Consistency with monitoring plan?</td><td>NA</td></tr></table> <p>Clarification Request No. 5. BFG and LDG is being burnt according the PDD. This means it needs to be cleaned. Please clarify why no cleaning and so no project emissions</p>		Boundary checklist	Yes / No	Source and gas(es) discussed in the PDD?	NA	Inclusion / exclusion justified?	NA	Explanation / Justification sufficient?	NA	Consistency with monitoring plan?	NA	CR5	☑
Boundary checklist	Yes / No															
Source and gas(es) discussed in the PDD?	NA															
Inclusion / exclusion justified?	NA															
Explanation / Justification sufficient?	NA															
Consistency with monitoring plan?	NA															
B.3.8.	Do the spatial and technological boundaries as verified on-site comply with the discussion provided by / indication included to the PDD?	1,2	The spatial extent of the grid in this PDD comprises all the power plants connected physically to the North China Grid, which covers Beijing City, Tianjin City, Hebei Province, Shanxi Province, Shandong Province and Inner Mongolia. It is verified on site. Also See the content of CAR1		CAR1	☑										
B.4. Description of how the baseline scenario is identified and description of the identified baseline scenario																
B.4.1.	Have all technically feasible baseline scenario alternatives to the project activity been identified and discussed by the PDD? Why can this list be considered as being complete (Step 1)?	1,2 , 11	<p>Baseline options and combinations which should be considered:</p> <table><tr><td>Defined and discussed in PDD?</td><td>Yes / No</td></tr><tr><td>industrial facility where waste gas/heat/pressure is generated</td><td>Yes</td></tr><tr><td>facility where the energy is produced</td><td>Yes</td></tr><tr><td>facility where the energy is consumed</td><td>Yes</td></tr></table>		Defined and discussed in PDD?	Yes / No	industrial facility where waste gas/heat/pressure is generated	Yes	facility where the energy is produced	Yes	facility where the energy is consumed	Yes	☑	☑		
Defined and discussed in PDD?	Yes / No															
industrial facility where waste gas/heat/pressure is generated	Yes															
facility where the energy is produced	Yes															
facility where the energy is consumed	Yes															

Validation Protocol

Project Title: Hebei Wasted Gas based Captive Power Plant Project in Longgang Group

Date of Completion: 15th April 2009

Number of Pages: 64



Industrie Service

CHECKLIST TOPIC / QUESTION		Ref.	COMMENTS	PDD in GSP	Final PDD															
			Yes, they are described and discussed there.																	
B.4.2.	Does the project identify correctly and exclude those options not in line with regulatory or legal requirements?	1,2	Yes. W1 Directly venting waste gas to atmosphere without incineration is conflict with relevant item in Gas Security Regulation for Industry Enterprise GB6222-2005, which requires the surplus gas was flared before being vented. It is excluded.	☑	☑															
B.4.3.	Have applicable regulatory or legal requirements been identified?	1,2 , 33	Yes. Gas Security Regulation for Industry Enterprise GB6222-2005 is identified.	☑	☑															
B.4.4.	Does the project participants exclude baseline options that depend on fuels (used for generating heat and/or power), that are not available at the project site?	1,2	Yes, they do exclude the baseline option which is not available on the project site.	☑	☑															
B.4.5.	Have all realistic and credible alternatives been discussed for the use of waste gas and the exclusion of options justified (Step 1, W1 – 4)?	1,2	<div>Alternative(s) may include, inter alia:<table><tr><th colspan="2">Categories</th><th>Yes / No</th></tr><tr><td>W1</td><td>Waste gas is directly vented to atmosphere without incineration;</td><td>Yes</td></tr><tr><td>W2</td><td>Waste gas is released to the atmosphere after incineration or waste heat is released to the atmosphere (waste pressure energy is not utilized);</td><td>Yes</td></tr><tr><td>W3</td><td>Waste gas/heat is sold as an energy source;</td><td>Yes</td></tr><tr><td>W4</td><td>Waste gas/heat/pressure is used for meeting energy demand.</td><td>Yes</td></tr></table></div>	Categories		Yes / No	W1	Waste gas is directly vented to atmosphere without incineration;	Yes	W2	Waste gas is released to the atmosphere after incineration or waste heat is released to the atmosphere (waste pressure energy is not utilized);	Yes	W3	Waste gas/heat is sold as an energy source;	Yes	W4	Waste gas/heat/pressure is used for meeting energy demand.	Yes	☑	☑
Categories		Yes / No																		
W1	Waste gas is directly vented to atmosphere without incineration;	Yes																		
W2	Waste gas is released to the atmosphere after incineration or waste heat is released to the atmosphere (waste pressure energy is not utilized);	Yes																		
W3	Waste gas/heat is sold as an energy source;	Yes																		
W4	Waste gas/heat/pressure is used for meeting energy demand.	Yes																		

Validation Protocol

Project Title: Hebei Wasted Gas based Captive Power Plant Project in Longgang Group

Date of Completion: 15th April 2009

Number of Pages: 64



Industrie Service

CHECKLIST TOPIC / QUESTION		Ref.	COMMENTS	PDD in GSP	Final PDD
B.4.6.	Have all realistic and credible alternatives been discussed for power generation and the exclusion of options justified (Step 1, P1 – 8)?	1,2	Alternative(s) may include, inter alia:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
			Categories		
			P1 Proposed project activity not undertaken as a CDM project activity;		
			P2 On-site or off-site existing/new fossil fuel fired cogeneration plant;		
			P3 On-site or off-site existing/new renewable energy based cogeneration plant;		
			P4 On-site or off-site existing/new fossil fuel based existing captive or identified plant;		
			P5 On-site or off-site existing/new renewable energy based existing captive or identified plant;		
			P6 Sourced Grid-connected power plants;		
			P7 Captive Electricity generation from waste gas (if project activity is captive generation with waste gas, this scenario represents captive generation with lower efficiency than the project activity.);		
			P8 Cogeneration from waste gas (if project activity is cogeneration with waste gas, this scenario represents cogeneration with lower efficiency than the project activity).		
B.4.7.	Have all realistic and credible alternatives been discussed for heat generation and the exclusion of options justifi-	1,2	Alternative(s) may include, inter alia:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
			Categories		

Validation Protocol

Project Title: Hebei Wasted Gas based Captive Power Plant Project in Longgang Group

Date of Completion: 15th April 2009

Number of Pages: 64



Industrie Service

CHECKLIST TOPIC / QUESTION		Ref.	COMMENTS		PDD in GSP	Final PDD
fied (Step 1, H1 – 9)?			H1	Proposed project activity not undertaken as a CDM project activity;	NA	
			H2	On-site or off-site existing/new fossil fuel based cogeneration plant;	NA	
			H3	On-site or off-site existing /new renewable energy based cogeneration plant;	NA	
			H4	An existing or new fossil fuel based boilers;	NA	
			H5	An existing or new renewable energy based boilers;	NA	
			H6	Any other source such as district heat;	NA	
			H7	Other heat generation technologies (e.g. heat pumps or solar energy);	NA	
			H8	Steam/ Process heat generation from waste gas, but with lower efficiency;	NA	
			H9	Cogeneration from waste gas, but with lower efficiency.	NA	
			For heat generation, because the output of the proposed project includes power generation only, thus the relevant alternatives are excluded from consideration.			
B.4.8.	Has a baseline scenario matrix been developed?	1,2	Yes A baseline scenario matrix has developed in table 2 in page 15 of the PDD.		☑	☑
B.4.9.	Has the fuel been identified and justified which were used in the baseline scenario (Step 2)?	1,2	Yes, the fuel has been identified and justified. the fuel for the baseline of energy source shall be determined by the real condition of NCPG		☑	☑

Validation Protocol

Project Title: Hebei Wasted Gas based Captive Power Plant Project in Longgang Group

Date of Completion: 15th April 2009

Number of Pages: 64



Industrie Service

CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	PDD in GSP	Final PDD																																						
B.4.10. Has the latest approved version of the “Tool for the demonstration and assessment of additionality” been used to eliminate non feasible baseline options (Step 3)?	1,2	Corrective Action Request No.6. Please indicate the latest approval version of the “Tool for the demonstration and assessment of additionality” in the PDD.	CAR6	☑																																						
B.4.11. Is it demonstrated that the option with the lowest baseline emissions is considered as the most likely baseline scenario, if more than one feasible alternative remain (Step 4)?	1,2	As only the combination W2/P6 is remained, which shall be considered as the most likely combination of baseline scenario, this issue is not applicable.	☑	☑																																						
B.4.12. Follows the identified baseline scenario one of the two project scenarios resulting from combinations of baseline options and scenarios applicable to ACM0012?	1,2	Applicability criteria of ACM0012: <table><tr><th colspan="5">Project Scenario: Cogeneration of energy</th></tr><tr><th rowspan="2">Scenario</th><th colspan="3">Baseline options</th><th rowspan="2">Yes / No</th></tr><tr><th>Waste gas</th><th>Power</th><th>Heat</th></tr><tr><td>1</td><td>W2</td><td>P4 or P6</td><td>H4</td><td>No</td></tr><tr><td>2</td><td>W2</td><td>P2</td><td>H2</td><td>No</td></tr><tr><th colspan="5">Project Scenario: Generation of Electricity or Heat only</th></tr><tr><th rowspan="2">Scenario</th><th colspan="2">Baseline options</th><th rowspan="2">Yes / No</th></tr><tr><th>Waste gas</th><th>Power/Heat</th></tr><tr><td>1</td><td>W2</td><td>P4 or P6/H4</td><td>Yes</td></tr></table>	Project Scenario: Cogeneration of energy					Scenario	Baseline options			Yes / No	Waste gas	Power	Heat	1	W2	P4 or P6	H4	No	2	W2	P2	H2	No	Project Scenario: Generation of Electricity or Heat only					Scenario	Baseline options		Yes / No	Waste gas	Power/Heat	1	W2	P4 or P6/H4	Yes	☑	☑
Project Scenario: Cogeneration of energy																																										
Scenario	Baseline options			Yes / No																																						
	Waste gas	Power	Heat																																							
1	W2	P4 or P6	H4	No																																						
2	W2	P2	H2	No																																						
Project Scenario: Generation of Electricity or Heat only																																										
Scenario	Baseline options		Yes / No																																							
	Waste gas	Power/Heat																																								
1	W2	P4 or P6/H4	Yes																																							
B.5. Description of how the anthropogenic emissions of GHG by sources are reduced below those that would have occurred in the absence of the registered CDM project activity (assessment and demonstration of additionality):																																										
B.5.1. Has CDM been considered before the starting date of the project activity and which evidence has been delivered?	1,2 , 9,10 , 22,	Evidence about the consideration for CDM at the early stage of the project. 1.Directorates summary of Xingtai Longhai Steel Group	CAR 7 CR6	☑																																						

Validation Protocol

Project Title: Hebei Wasted Gas based Captive Power Plant Project in Longgang Group

Date of Completion: 15th April 2009

Number of Pages: 64



Industrie Service

CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	PDD in GSP	Final PDD
	23, 24, 47, 41, 11, 42	<p>Generation for electricity Co., Ltd, , dated on Jan. 20 of 2007.</p> <p>Purchasing contract of generation units with Shandong Ji'nan generation electricity devices plant, dated on Jan. 7 2007.</p> <p><u>Corrective Action Request No.7.</u></p> <p>--The project starting date is on Jan. 2007 according to the description of Supervision work summarizing report of 12MW Waste Gas based power plant in Xingtai Longhai, dated on Jan. 14 2008 by Hebei Xingyuan engineering construction supervision Co. Ltd..</p> <p>--The direct evidence of the project starting date should be delivered to the DOE.</p> <p><u>Clarification Request No. 6.</u></p> <p>As the purchasing contract is signed on Jan 7 of 2007 before the date of directorate summary on Jan. 20 of 2007.</p> <p>Please clarify why the company considered to apply for CDM after the decision to invest this project (the purchasing contract of generation units).</p>		
B.5.2. In case of applying step 2 / investment analysis of the additionality tool: Is the analysis method identified appropriately (step 2a)?	1,2	<p>Yes. The <i>Tools for the Demonstration and Assessment of Additionality</i> suggests three analysis methods which are simple cost analysis (Option I), investment comparison analysis (Option II) and benchmark analysis (Option III). They are identified and justified.</p> <p>Also see the CAR in B.4.10</p>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
B.5.3. In case of Option I (simple cost analysis): Is it demonstrated that the activity produces no economic benefits other than CDM income?	1,2	<p>Since the Project will earn revenues not only from the CER sales but also from electricity sales, the simple cost analysis method is not appropriate.</p>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
B.5.4. In case of Option II (investment comparison analysis): Is the most suitable finan-	1,2	<p>Investment comparison analysis method is only applicable to projects whose alternatives are similar investment projects. The al-</p>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Validation Protocol

Project Title: Hebei Wasted Gas based Captive Power Plant Project in Longgang Group

Date of Completion: 15th April 2009

Number of Pages: 64



Industrie Service

CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	PDD in GSP	Final PDD
cial indicator clearly identified (IRR, NPV, cost benefit ratio, or (levelized) unit cost)?		ternative baseline scenario of the Project is the North China Power Grid rather than new investment projects. Therefore Option II is not appropriate.		
B.5.5. In case of Option III (benchmark analysis): Is the most suitable financial indicator clearly identified (IRR, NPV, cost benefit ratio, or (levelized) unit cost)?	1,2	The Project will use benchmark analysis method (Option III) based on the consideration that benchmark IRR of the waste gases based power generation project is available.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
B.5.6. In case of Option II or Option III: Is the calculation of financial figures for this indicator correctly done for all alternatives and the project activity?	1,2	Yes. Project IRR without CERs 9.02% and Project IRR with CERs 17.27%. Financial benchmark is 13% <u>Clarification Request No. 7.</u> Projects in China with TRT are already difficult to prove additional-ity. Especially what is written in the PDD is not at all good. They say that CER income will be used almost 100% to finance the TRT part of the project since the 24 MW part is rentable by its own.	CR7	<input checked="" type="checkbox"/>
B.5.7. In case of Option II or Option III: Is the analysis presented in a transparent manner including publicly available proofs for the utilized data?	1,2 , 11, 21, 29, 43, 44, 45, 46	<u>Corrective Action Request No.8.</u> --We need proof concerning the development in the last years of the electricity tariff. That way we can estimate if a 10% increase in the next 10 years is really not plausible. --The IRR calculation sheet in excel should be delivered to the DOE. --The utilized data sources should be indicated in the PDD and translated in English and delivered to the DOE. <u>Clarification Request No. 8.</u> --In the financial analysis, O&M cost (52.06 Million RMB) is about 1/3 of total investment (159.50 Million RMB). This is extremely high and against economic assessment common practise in China. How did the design institute conclude this cost?	CAR8 CR8	<input checked="" type="checkbox"/>

Validation Protocol

Project Title: Hebei Wasted Gas based Captive Power Plant Project in Longgang Group

Date of Completion: 15th April 2009

Number of Pages: 64



Industrie Service

CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	PDD in GSP	Final PDD
		--Why do the PPs use only 10% for sensitivity analysis? Why not 20%? 10% is the minimum for a sensitivity analysis, there must be a good explanation why it is used.		
B.5.8. In case of applying step 3 (barrier analysis) of the additionality tool: Is a complete list of barriers developed that prevent the different alternatives to occur?	1,2	NA	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
B.5.9. In case of applying step 3 (barrier analysis): Is transparent and documented evidence provided on the existence and significance of these barriers?	1,2	NA	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
B.5.10. In case of applying step 3 (barrier analysis): Is it transparently shown that the execution of at least one of the alternatives is not prevented by the identified barriers?	1,2	NA	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
B.5.11. Have other activities in the host country / region similar to the project activity been identified and are these activities appropriately analyzed by the PDD (step 4a)?	1,2	<u>Corrective Action Request No.9.</u> Please indicate the data sources about common practice analysis in the PDD and provide them to the DOE.	CAR9	<input checked="" type="checkbox"/>
B.5.12. If similar activities are occurring: Is it demonstrated that in spite of these similarities the project activity would not be implemented without the CDM component (step 4b)?	1,2	There is no similar activities that occur. Hence this issue is not applicable.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
B.6. Emissions reductions				
<i>B.6.1. Explanation of methodological choices</i>				
B.6.1.1. Is it explained how the procedures provided in the methodology are applied by the proposed project activity?	1,2	Yes. The consolidated methodology ACM0012 is applied in the context of the Project in the following steps:	CAR10	<input checked="" type="checkbox"/>

Validation Protocol

Project Title: Hebei Wasted Gas based Captive Power Plant Project in Longgang Group

Date of Completion: 15th April 2009

Number of Pages: 64



Industrie Service

CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	PDD in GSP	Final PDD
		<ul style="list-style-type: none"> ·calculate the baseline GHG emissions; ·calculate the emission factor of grid; ·calculate the project GHG emissions; ·calculate the project leakage; ·calculate the emission reductions. <p><u>Corrective Action Request No.10.</u> Please add the Version of the methodology in the PDD..</p>		
B.6.1.2.Is every selection of options offered by the methodology correctly justified and is this justification in line with the situation verified on-site?	1,2 , 48	<p>Yes. Most of them are consistent with the situation verified on site. But the following issue should be revised.</p> <p><u>Corrective Action Request No.11.</u> As it is C2H2 as the fuel for ignition, not the BFG described in the FSR, hence the project emission should be considered and discussed in the PDD.</p> <p><u>Clarification Request No. 9.</u> Is the Institute which did the Feasibility Study Report accredited to do such studies?</p>	CAR11 CR9	<input checked="" type="checkbox"/>
B.6.1.3.Are the formulae required for the determination of baseline emissions correctly presented, enabling a complete identification of parameter to be used and / or monitored?	1,2	<p><u>Corrective Action Request No.12.</u> Please take out from the formula for the BE the two F factors. It must be applied exactly like in the methodology.</p> <p><u>Clarification Request No. 10.</u> Why do PPs use NCV calculating fcap for the two first boilers?</p>	CAR12 CR10	<input checked="" type="checkbox"/>
B.6.1.4.Are the formulae required for the determination of project emissions correctly presented, enabling a complete identification of parameter to be used and / or monitored?	1,2	<p>Yes. The formulae are correctly presented in the PDD.</p>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Validation Protocol

Project Title: Hebei Wasted Gas based Captive Power Plant Project in Longgang Group

Date of Completion: 15th April 2009

Number of Pages: 64



Industrie Service

CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	PDD in GSP	Final PDD																		
B.6.1.5.Are the formulae required for the de-termination of emission reductions cor-rectly presented?	1,2	Yes. The formulae are correctly presented in the PDD.	☑	☑																		
<i>B.6.2. Data and parameters that are available at validation:</i> <i>The calculation of baseline emissions ($BE_{En,v}$) depends on the identified baseline scenario.</i> <i>Scenario 1 represents the situation where the electricity is obtained from a specific existing power plant or from the grid and heat from a fossil fuel based element process.</i> <i>Scenario 2 represents the situation where the recipient plant(s) obtain electricity and/or heat generated by a fossil fuel based existing/new cogeneration plant.</i>																						
B.6.2.1.Is the list of parameters presented in chapter B.6.2 considered to be complete with regard to the requirements of the applied methodology?	1,2	Corrective Action Request No.13. The list of parameters is considered to be incomplete. Please add the data or parameters into B.6.2 of the PDD, which are marked “No” in the following tables of the protocol. The list is still not exactly like in Methodology. Please amend it accord-ingly.	CAR13	☑																		
Integrate the required amount of sub-checklists for monitoring parameter and comment on any line answered with “No”.																						
B.6.2.2.Parameter Title: f_{wg} fraction of total electricity generated by the project activity using waste gas	1,2	<table><tr><th>Data Checklist</th><th>Yes / No</th></tr><tr><td>Title in line with methodology?</td><td>No</td></tr><tr><td>Data unit correctly expressed?</td><td>No</td></tr><tr><td>Appropriate description of parameter?</td><td>No</td></tr><tr><td>Source clearly referenced?</td><td>No</td></tr><tr><td>Correct value provided?</td><td>No</td></tr><tr><td>Has this value been verified?</td><td>No</td></tr><tr><td>Choice of data correctly justified?</td><td>No</td></tr><tr><td>Measurement method correctly described?</td><td>No</td></tr></table>	Data Checklist	Yes / No	Title in line with methodology?	No	Data unit correctly expressed?	No	Appropriate description of parameter?	No	Source clearly referenced?	No	Correct value provided?	No	Has this value been verified?	No	Choice of data correctly justified?	No	Measurement method correctly described?	No	See CAR13	☑
Data Checklist	Yes / No																					
Title in line with methodology?	No																					
Data unit correctly expressed?	No																					
Appropriate description of parameter?	No																					
Source clearly referenced?	No																					
Correct value provided?	No																					
Has this value been verified?	No																					
Choice of data correctly justified?	No																					
Measurement method correctly described?	No																					
B.6.2.3.Parameter Title: f_{cap} fraction of total energy produced using waste gas	1,2	<table><tr><th>Data Checklist</th><th>Yes / No</th></tr><tr><td></td><td></td></tr></table>	Data Checklist	Yes / No			See CAR13	☑														
Data Checklist	Yes / No																					

Validation Protocol

Project Title: Hebei Wasted Gas based Captive Power Plant Project in Longgang Group

Date of Completion: 15th April 2009

Number of Pages: 64



Industrie Service

CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS		PDD in GSP	Final PDD																		
		Title in line with methodology?	No																				
		Data unit correctly expressed?	No																				
		Appropriate description of parameter?	No																				
		Source clearly referenced?	No																				
		Correct value provided?	No																				
		Has this value been verified?	No																				
		Choice of data correctly justified?	No																				
		Measurement method correctly described?	No																				
B.6.2.4.Parameter Title: $\eta_{\text{Plant}, j}$ overall efficiency of the existing plant that would be used by recipient	1,2	<table><tr><th>Data Checklist</th><th>Yes / No</th></tr><tr><td>Title in line with methodology?</td><td>NA</td></tr><tr><td>Data unit correctly expressed?</td><td>NA</td></tr><tr><td>Appropriate description of parameter?</td><td>NA</td></tr><tr><td>Source clearly referenced?</td><td>NA</td></tr><tr><td>Correct value provided?</td><td>NA</td></tr><tr><td>Has this value been verified?</td><td>NA</td></tr><tr><td>Choice of data correctly justified?</td><td>NA</td></tr><tr><td>Measurement method correctly described?</td><td>NA</td></tr></table> <p>There is no existing plant.</p>		Data Checklist	Yes / No	Title in line with methodology?	NA	Data unit correctly expressed?	NA	Appropriate description of parameter?	NA	Source clearly referenced?	NA	Correct value provided?	NA	Has this value been verified?	NA	Choice of data correctly justified?	NA	Measurement method correctly described?	NA	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Data Checklist	Yes / No																						
Title in line with methodology?	NA																						
Data unit correctly expressed?	NA																						
Appropriate description of parameter?	NA																						
Source clearly referenced?	NA																						
Correct value provided?	NA																						
Has this value been verified?	NA																						
Choice of data correctly justified?	NA																						
Measurement method correctly described?	NA																						
B.6.2.5.Parameter Title: f_{wg} fraction of total heat generated by the project activity electricity using waste gas	1,2	<table><tr><th>Data Checklist</th><th>Yes / No</th></tr><tr><td>Title in line with methodology?</td><td>NA</td></tr><tr><td>Data unit correctly expressed?</td><td>NA</td></tr><tr><td>Appropriate description of parameter?</td><td>NA</td></tr><tr><td>Source clearly referenced?</td><td>NA</td></tr><tr><td>Correct value provided?</td><td>NA</td></tr><tr><td>Has this value been verified?</td><td>NA</td></tr><tr><td>Choice of data correctly justified?</td><td>NA</td></tr><tr><td>Measurement method correctly described?</td><td>NA</td></tr></table>		Data Checklist	Yes / No	Title in line with methodology?	NA	Data unit correctly expressed?	NA	Appropriate description of parameter?	NA	Source clearly referenced?	NA	Correct value provided?	NA	Has this value been verified?	NA	Choice of data correctly justified?	NA	Measurement method correctly described?	NA	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Data Checklist	Yes / No																						
Title in line with methodology?	NA																						
Data unit correctly expressed?	NA																						
Appropriate description of parameter?	NA																						
Source clearly referenced?	NA																						
Correct value provided?	NA																						
Has this value been verified?	NA																						
Choice of data correctly justified?	NA																						
Measurement method correctly described?	NA																						

Validation Protocol

Project Title: Hebei Wasted Gas based Captive Power Plant Project in Longgang Group

Date of Completion: 15th April 2009

Number of Pages: 64



Industrie Service

CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	PDD in GSP	Final PDD																				
		There is only electricity generated from the proposed project.																						
B.6.2.6.Parameter Title: $\eta_{EP, i, j}$ efficiency of the element process that would have been supplied heat to the recipient	1,2	<table><tr><th>Data Checklist</th><th>Yes / No</th></tr><tr><td>Title in line with methodology?</td><td>NA</td></tr><tr><td>Data unit correctly expressed?</td><td>NA</td></tr><tr><td>Appropriate description of parameter?</td><td>NA</td></tr><tr><td>Source clearly referenced?</td><td>NA</td></tr><tr><td>Correct value provided?</td><td>NA</td></tr><tr><td>Has this value been verified?</td><td>NA</td></tr><tr><td>Choice of data correctly justified?</td><td>NA</td></tr><tr><td>Measurement method correctly described?</td><td>NA</td></tr></table> <p>There is only electricity generated from the proposed project.</p>	Data Checklist	Yes / No	Title in line with methodology?	NA	Data unit correctly expressed?	NA	Appropriate description of parameter?	NA	Source clearly referenced?	NA	Correct value provided?	NA	Has this value been verified?	NA	Choice of data correctly justified?	NA	Measurement method correctly described?	NA	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
Data Checklist	Yes / No																							
Title in line with methodology?	NA																							
Data unit correctly expressed?	NA																							
Appropriate description of parameter?	NA																							
Source clearly referenced?	NA																							
Correct value provided?	NA																							
Has this value been verified?	NA																							
Choice of data correctly justified?	NA																							
Measurement method correctly described?	NA																							
B.6.2.7.Parameter Title: η_{Cogen} efficiency of cogeneration plant using fossil fuel	1,2	<table><tr><th>Data Checklist</th><th>Yes / No</th></tr><tr><td>Title in line with methodology?</td><td>NA</td></tr><tr><td>Data unit correctly expressed?</td><td>NA</td></tr><tr><td>Appropriate description of parameter?</td><td>NA</td></tr><tr><td>Source clearly referenced?</td><td>NA</td></tr><tr><td>Correct value provided?</td><td>NA</td></tr><tr><td>Has this value been verified?</td><td>NA</td></tr><tr><td>Choice of data correctly justified?</td><td>NA</td></tr><tr><td>Measurement method correctly described?</td><td>NA</td></tr><tr><td>No cogeneration plant.</td><td></td></tr></table>	Data Checklist	Yes / No	Title in line with methodology?	NA	Data unit correctly expressed?	NA	Appropriate description of parameter?	NA	Source clearly referenced?	NA	Correct value provided?	NA	Has this value been verified?	NA	Choice of data correctly justified?	NA	Measurement method correctly described?	NA	No cogeneration plant.		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Data Checklist	Yes / No																							
Title in line with methodology?	NA																							
Data unit correctly expressed?	NA																							
Appropriate description of parameter?	NA																							
Source clearly referenced?	NA																							
Correct value provided?	NA																							
Has this value been verified?	NA																							
Choice of data correctly justified?	NA																							
Measurement method correctly described?	NA																							
No cogeneration plant.																								
B.6.2.8.Parameter Title: $Q_{WG, y}$ quantity of waste gas used for energy generation during year	1,2	<table><tr><th>Data Checklist</th><th>Yes / No</th></tr><tr><td>Title in line with methodology?</td><td>No</td></tr><tr><td>Data unit correctly expressed?</td><td>No</td></tr><tr><td>Appropriate description of parameter?</td><td>No</td></tr></table>	Data Checklist	Yes / No	Title in line with methodology?	No	Data unit correctly expressed?	No	Appropriate description of parameter?	No	CAR13	<input checked="" type="checkbox"/>												
Data Checklist	Yes / No																							
Title in line with methodology?	No																							
Data unit correctly expressed?	No																							
Appropriate description of parameter?	No																							

Validation Protocol

Project Title: Hebei Wasted Gas based Captive Power Plant Project in Longgang Group

Date of Completion: 15th April 2009

Number of Pages: 64



Industrie Service

CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS		PDD in GSP	Final PDD																		
		Source clearly referenced?	No																				
		Correct value provided?	No																				
		Has this value been verified?	No																				
		Choice of data correctly justified?	No																				
		Measurement method correctly described?	No																				
		see CAR 13																					
B.6.2.9.Parameter Title: $\eta_{\text{Boiler, fl}}$ efficiency of the boiler that would have been used to generate the steam	1,2	<table><tr><th>Data Checklist</th><th>Yes / No</th></tr><tr><td>Title in line with methodology?</td><td>NA</td></tr><tr><td>Data unit correctly expressed?</td><td>NA</td></tr><tr><td>Appropriate description of parameter?</td><td>NA</td></tr><tr><td>Source clearly referenced?</td><td>NA</td></tr><tr><td>Correct value provided?</td><td>NA</td></tr><tr><td>Has this value been verified?</td><td>NA</td></tr><tr><td>Choice of data correctly justified?</td><td>NA</td></tr><tr><td>Measurement method correctly described?</td><td>NA</td></tr></table> No boiler has been used to generate the steam.		Data Checklist	Yes / No	Title in line with methodology?	NA	Data unit correctly expressed?	NA	Appropriate description of parameter?	NA	Source clearly referenced?	NA	Correct value provided?	NA	Has this value been verified?	NA	Choice of data correctly justified?	NA	Measurement method correctly described?	NA	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Data Checklist	Yes / No																						
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Source clearly referenced?	NA																						
Correct value provided?	NA																						
Has this value been verified?	NA																						
Choice of data correctly justified?	NA																						
Measurement method correctly described?	NA																						
B.6.2.10. Parameter Title: $Q_{\text{WG, FI, B}}$ amount of waste gas flared using steam prior to the implementation of the project activity	1,2	<table><tr><th>Data Checklist</th><th>Yes / No</th></tr><tr><td>Title in line with methodology?</td><td>NA</td></tr><tr><td>Data unit correctly expressed?</td><td>NA</td></tr><tr><td>Appropriate description of parameter?</td><td>NA</td></tr><tr><td>Source clearly referenced?</td><td>NA</td></tr><tr><td>Correct value provided?</td><td>NA</td></tr><tr><td>Has this value been verified?</td><td>NA</td></tr><tr><td>Choice of data correctly justified?</td><td>NA</td></tr><tr><td>Measurement method correctly described?</td><td>NA</td></tr></table>		Data Checklist	Yes / No	Title in line with methodology?	NA	Data unit correctly expressed?	NA	Appropriate description of parameter?	NA	Source clearly referenced?	NA	Correct value provided?	NA	Has this value been verified?	NA	Choice of data correctly justified?	NA	Measurement method correctly described?	NA	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
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Title in line with methodology?	NA																						
Data unit correctly expressed?	NA																						
Appropriate description of parameter?	NA																						
Source clearly referenced?	NA																						
Correct value provided?	NA																						
Has this value been verified?	NA																						
Choice of data correctly justified?	NA																						
Measurement method correctly described?	NA																						
B.6.2.11. Parameter Title: $Q_{\text{st, fl, B}}$	1,2			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>																		

Validation Protocol

Project Title: Hebei Wasted Gas based Captive Power Plant Project in Longgang Group

Date of Completion: 15th April 2009

Number of Pages: 64



Industrie Service

CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS		PDD in GSP	Final PDD
steam used to flare the waste gas prior to the implementation of the project activity		Data Checklist	Yes / No		
		Title in line with methodology?	NA		
		Data unit correctly expressed?	NA		
		Appropriate description of parameter?	NA		
		Source clearly referenced?	NA		
		Correct value provided?	NA		
		Has this value been verified?	NA		
		Choice of data correctly justified?	NA		
		Measurement method correctly described?	NA		
B.6.2.12. Parameter Title: NCV_i net calorific value annual average for each consumed fuel and the waste gas/heat	1,2	Data Checklist	Yes / No	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
		Title in line with methodology?	Yes		
		Data unit correctly expressed?	Yes		
		Appropriate description of parameter?	Yes		
		Source clearly referenced?	Yes		
		Correct value provided?	Yes		
		Has this value been verified?	Yes		
		Choice of data correctly justified?	Yes		
		Measurement method correctly described?	Yes		
B.6.2.13. Parameter Title: $Q_{WG, BL}$ quantity of waste gas generated prior to the start of the project activity	1,2	Data Checklist	Yes / No	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
		Title in line with methodology?	Yes		
		Data unit correctly expressed?	Yes		
		Appropriate description of parameter?	Yes		
		Source clearly referenced?	Yes		
		Correct value provided?	Yes		
		Has this value been verified?	Yes		
		Choice of data correctly justified?	Yes		
		Measurement method correctly described?	Yes		

Validation Protocol

Project Title: Hebei Wasted Gas based Captive Power Plant Project in Longgang Group

Date of Completion: 15th April 2009

Number of Pages: 64



Industrie Service

CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	PDD in GSP	Final PDD																		
B.6.2.14. Parameter Title: $Q_{BL, product}$ production by process that most logically relates to waste gas generation in baseline	1,2	<table><tr><th>Data Checklist</th><th>Yes / No</th></tr><tr><td>Title in line with methodology?</td><td>No</td></tr><tr><td>Data unit correctly expressed?</td><td>No</td></tr><tr><td>Appropriate description of parameter?</td><td>No</td></tr><tr><td>Source clearly referenced?</td><td>No</td></tr><tr><td>Correct value provided?</td><td>No</td></tr><tr><td>Has this value been verified?</td><td>No</td></tr><tr><td>Choice of data correctly justified?</td><td>No</td></tr><tr><td>Measurement method correctly described?</td><td>No</td></tr></table>	Data Checklist	Yes / No	Title in line with methodology?	No	Data unit correctly expressed?	No	Appropriate description of parameter?	No	Source clearly referenced?	No	Correct value provided?	No	Has this value been verified?	No	Choice of data correctly justified?	No	Measurement method correctly described?	No	See CAR13	<input checked="" type="checkbox"/>
Data Checklist	Yes / No																					
Title in line with methodology?	No																					
Data unit correctly expressed?	No																					
Appropriate description of parameter?	No																					
Source clearly referenced?	No																					
Correct value provided?	No																					
Has this value been verified?	No																					
Choice of data correctly justified?	No																					
Measurement method correctly described?	No																					
B.6.2.15. Parameter Title: $q_{wg, product}$ amount of waste gas/heat/pressure the industrial facility generates per unit of product generated by the process that generates waste gas/heat/pressure	1,2	<table><tr><th>Data Checklist</th><th>Yes / No</th></tr><tr><td>Title in line with methodology?</td><td>No</td></tr><tr><td>Data unit correctly expressed?</td><td>No</td></tr><tr><td>Appropriate description of parameter?</td><td>No</td></tr><tr><td>Source clearly referenced?</td><td>No</td></tr><tr><td>Correct value provided?</td><td>No</td></tr><tr><td>Has this value been verified?</td><td>No</td></tr><tr><td>Choice of data correctly justified?</td><td>No</td></tr><tr><td>Measurement method correctly described?</td><td>No</td></tr></table>	Data Checklist	Yes / No	Title in line with methodology?	No	Data unit correctly expressed?	No	Appropriate description of parameter?	No	Source clearly referenced?	No	Correct value provided?	No	Has this value been verified?	No	Choice of data correctly justified?	No	Measurement method correctly described?	No	See CAR13	<input checked="" type="checkbox"/>
Data Checklist	Yes / No																					
Title in line with methodology?	No																					
Data unit correctly expressed?	No																					
Appropriate description of parameter?	No																					
Source clearly referenced?	No																					
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Validation Protocol

Project Title: Hebei Wasted Gas based Captive Power Plant Project in Longgang Group

Date of Completion: 15th April 2009

Number of Pages: 64



Industrie Service

CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	PDD in GSP	Final PDD																		
B.6.2.16. Parameter Title: Annual electricity supplied to the grid prior to retrofit (applicable only for retrofit and modification activities)	1,2	<table><tr><th>Data Checklist</th><th>Yes / No</th></tr><tr><td>Title in line with methodology?</td><td>NA</td></tr><tr><td>Data unit correctly expressed?</td><td>NA</td></tr><tr><td>Appropriate description of parameter?</td><td>NA</td></tr><tr><td>Source clearly referenced?</td><td>NA</td></tr><tr><td>Correct value provided?</td><td>NA</td></tr><tr><td>Has this value been verified?</td><td>NA</td></tr><tr><td>Choice of data correctly justified?</td><td>NA</td></tr><tr><td>Measurement method correctly described?</td><td>NA</td></tr></table>	Data Checklist	Yes / No	Title in line with methodology?	NA	Data unit correctly expressed?	NA	Appropriate description of parameter?	NA	Source clearly referenced?	NA	Correct value provided?	NA	Has this value been verified?	NA	Choice of data correctly justified?	NA	Measurement method correctly described?	NA	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Data Checklist	Yes / No																					
Title in line with methodology?	NA																					
Data unit correctly expressed?	NA																					
Appropriate description of parameter?	NA																					
Source clearly referenced?	NA																					
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Has this value been verified?	NA																					
Choice of data correctly justified?	NA																					
Measurement method correctly described?	NA																					
B.6.2.17. Parameter Title: Emission factor of the grid (CM)	1,2	<table><tr><th>Data Checklist</th><th>Yes / No</th></tr><tr><td>Title in line with methodology?</td><td>Yes</td></tr><tr><td>Data unit correctly expressed?</td><td>Yes</td></tr><tr><td>Appropriate description of parameter?</td><td>Yes</td></tr><tr><td>Source clearly referenced?</td><td>Yes</td></tr><tr><td>Correct value provided?</td><td>Yes</td></tr><tr><td>Has this value been verified?</td><td>Yes</td></tr><tr><td>Choice of data correctly justified?</td><td>Yes</td></tr><tr><td>Measurement method correctly described?</td><td>Yes</td></tr></table> <p>It has been calculated</p>	Data Checklist	Yes / No	Title in line with methodology?	Yes	Data unit correctly expressed?	Yes	Appropriate description of parameter?	Yes	Source clearly referenced?	Yes	Correct value provided?	Yes	Has this value been verified?	Yes	Choice of data correctly justified?	Yes	Measurement method correctly described?	Yes	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Data Checklist	Yes / No																					
Title in line with methodology?	Yes																					
Data unit correctly expressed?	Yes																					
Appropriate description of parameter?	Yes																					
Source clearly referenced?	Yes																					
Correct value provided?	Yes																					
Has this value been verified?	Yes																					
Choice of data correctly justified?	Yes																					
Measurement method correctly described?	Yes																					

Validation Protocol

Project Title: Hebei Wasted Gas based Captive Power Plant Project in Longgang Group

Date of Completion: 15th April 2009

Number of Pages: 64



Industrie Service

CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	PDD in GSP	Final PDD																		
B.6.2.18. Parameter Title: Operating margin (OM) emission factor of the grid	1,2	<table><thead><tr><th>Data Checklist</th><th>Yes / No</th></tr></thead><tbody><tr><td>Title in line with methodology?</td><td>Yes</td></tr><tr><td>Data unit correctly expressed?</td><td>Yes</td></tr><tr><td>Appropriate description?</td><td>Yes</td></tr><tr><td>Source clearly referenced?</td><td>Yes</td></tr><tr><td>Correct value provided?</td><td>Yes</td></tr><tr><td>Has this value been verified?</td><td>Yes</td></tr><tr><td>Choice of data correctly justified?</td><td>Yes</td></tr><tr><td>Measurement method correctly described?</td><td>Yes</td></tr></tbody></table> <p>It has been calculated</p>	Data Checklist	Yes / No	Title in line with methodology?	Yes	Data unit correctly expressed?	Yes	Appropriate description?	Yes	Source clearly referenced?	Yes	Correct value provided?	Yes	Has this value been verified?	Yes	Choice of data correctly justified?	Yes	Measurement method correctly described?	Yes	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Data Checklist	Yes / No																					
Title in line with methodology?	Yes																					
Data unit correctly expressed?	Yes																					
Appropriate description?	Yes																					
Source clearly referenced?	Yes																					
Correct value provided?	Yes																					
Has this value been verified?	Yes																					
Choice of data correctly justified?	Yes																					
Measurement method correctly described?	Yes																					
B.6.2.19. Parameter Title: Build margin (BM) emission factor of the grid	1,2	<table><thead><tr><th>Data Checklist</th><th>Yes / No</th></tr></thead><tbody><tr><td>Title in line with methodology?</td><td>Yes</td></tr><tr><td>Data unit correctly expressed?</td><td>Yes</td></tr><tr><td>Appropriate description of parameter?</td><td>Yes</td></tr><tr><td>Source clearly referenced?</td><td>Yes</td></tr><tr><td>Correct value provided?</td><td>Yes</td></tr><tr><td>Has this value been verified?</td><td>Yes</td></tr><tr><td>Choice of data correctly justified?</td><td>Yes</td></tr></tbody></table>	Data Checklist	Yes / No	Title in line with methodology?	Yes	Data unit correctly expressed?	Yes	Appropriate description of parameter?	Yes	Source clearly referenced?	Yes	Correct value provided?	Yes	Has this value been verified?	Yes	Choice of data correctly justified?	Yes	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
Data Checklist	Yes / No																					
Title in line with methodology?	Yes																					
Data unit correctly expressed?	Yes																					
Appropriate description of parameter?	Yes																					
Source clearly referenced?	Yes																					
Correct value provided?	Yes																					
Has this value been verified?	Yes																					
Choice of data correctly justified?	Yes																					

Validation Protocol

Project Title: Hebei Wasted Gas based Captive Power Plant Project in Longgang Group

Date of Completion: 15th April 2009

Number of Pages: 64



Industrie Service

CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS			PDD in GSP	Final PDD
		Measurement method correctly described?	Yes			
		It has been calculated				

Validation Protocol

Project Title: Hebei Wasted Gas based Captive Power Plant Project in Longgang Group

Date of Completion: 15th April 2009

Number of Pages: 64



Industrie Service

CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS		PDD in GSP	Final PDD																		
B.6.2.20. Parameter Title: fuel consumption of each power source	1,2	<table><tr><th>Data Checklist</th><th>Yes / No</th></tr><tr><td>Title in line with methodology?</td><td>Yes</td></tr><tr><td>Data unit correctly expressed?</td><td>Yes</td></tr><tr><td>Appropriate description of parameter?</td><td>Yes</td></tr><tr><td>Source clearly referenced?</td><td>Yes</td></tr><tr><td>Correct value provided?</td><td>Yes</td></tr><tr><td>Has this value been verified?</td><td>Yes</td></tr><tr><td>Choice of data correctly justified?</td><td>Yes</td></tr><tr><td>Measurement method correctly described?</td><td>Yes</td></tr></table>		Data Checklist	Yes / No	Title in line with methodology?	Yes	Data unit correctly expressed?	Yes	Appropriate description of parameter?	Yes	Source clearly referenced?	Yes	Correct value provided?	Yes	Has this value been verified?	Yes	Choice of data correctly justified?	Yes	Measurement method correctly described?	Yes	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Data Checklist	Yes / No																						
Title in line with methodology?	Yes																						
Data unit correctly expressed?	Yes																						
Appropriate description of parameter?	Yes																						
Source clearly referenced?	Yes																						
Correct value provided?	Yes																						
Has this value been verified?	Yes																						
Choice of data correctly justified?	Yes																						
Measurement method correctly described?	Yes																						
B.6.2.21. Parameter Title: emission coefficient of each fuel	1,2	<table><tr><th>Data Checklist</th><th>Yes / No</th></tr><tr><td>Title in line with methodology?</td><td>Yes</td></tr><tr><td>Data unit correctly expressed?</td><td>Yes</td></tr><tr><td>Appropriate description of parameter?</td><td>Yes</td></tr><tr><td>Source clearly referenced?</td><td>Yes</td></tr><tr><td>Correct value provided?</td><td>Yes</td></tr><tr><td>Has this value been verified?</td><td>Yes</td></tr><tr><td>Choice of data correctly justified?</td><td>Yes</td></tr><tr><td>Measurement method correctly described?</td><td>Yes</td></tr></table>		Data Checklist	Yes / No	Title in line with methodology?	Yes	Data unit correctly expressed?	Yes	Appropriate description of parameter?	Yes	Source clearly referenced?	Yes	Correct value provided?	Yes	Has this value been verified?	Yes	Choice of data correctly justified?	Yes	Measurement method correctly described?	Yes	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Data Checklist	Yes / No																						
Title in line with methodology?	Yes																						
Data unit correctly expressed?	Yes																						
Appropriate description of parameter?	Yes																						
Source clearly referenced?	Yes																						
Correct value provided?	Yes																						
Has this value been verified?	Yes																						
Choice of data correctly justified?	Yes																						
Measurement method correctly described?	Yes																						
B.6.2.22. Parameter Title:	1,2			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>																		

Validation Protocol

Project Title: Hebei Wasted Gas based Captive Power Plant Project in Longgang Group

Date of Completion: 15th April 2009

Number of Pages: 64



Industrie Service

CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS		PDD in GSP	Final PDD
electricity generation of each power source		Data Checklist	Yes / No		
		Title in line with methodology?	Yes		
		Data unit correctly expressed?	Yes		
		Appropriate description of parameter?	Yes		
		Source clearly referenced?	Yes		
		Correct value provided?	Yes		
		Has this value been verified?	Yes		
		Choice of data correctly justified?	Yes		
		Measurement method correctly described?	Yes		
B.6.2.23. Parameter Title: fraction of time with low costs /must run plant at the margin (for simple adjusted OM only)		Data Checklist	Yes / No	☑	☑
		Title in line with methodology?	NA		
		Data unit correctly expressed?	NA		
		Appropriate description of parameter?	NA		
		Source clearly referenced?	NA		
		Correct value provided?	NA		
		Has this value been verified?	NA		
		Choice of data correctly justified?	NA		
		Measurement method correctly described?	NA		
B.6.2.24. Parameter Title: electricity imports	1,2			See CAR13	☑

Validation Protocol

Project Title: Hebei Wasted Gas based Captive Power Plant Project in Longgang Group

Date of Completion: 15th April 2009

Number of Pages: 64



Industrie Service

CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS		PDD in GSP	Final PDD
		Data Checklist	Yes / No		
		Title in line with methodology?	No		
		Data unit correctly expressed?	No		
		Appropriate description of parameter?	No		
		Source clearly referenced?	No		
		Correct value provided?	No		
		Has this value been verified?	No		
		Choice of data correctly justified?	No		
		Measurement method correctly described?	No		
B.6.2.25. Parameter Title: CO2 emission coefficient of fuels used in connected grids	1,2			☑	☑
		Data Checklist	Yes / No		
		Title in line with methodology?	Yes		
		Data unit correctly expressed?	Yes		
		Appropriate description of parameter?	Yes		
		Source clearly referenced?	Yes		
		Correct value provided?	Yes		
		Has this value been verified?	Yes		
		Choice of data correctly justified?	Yes		
		Measurement method correctly described?	Yes		
B.6.3. Ex-ante calculation of emission reductions					
B.6.3.1. Is the projection based on the same	1,2	Yes. The monitoring is based on the multiplication of the electricity		☑	☑

Validation Protocol

Project Title: Hebei Wasted Gas based Captive Power Plant Project in Longgang Group

Date of Completion: 15th April 2009

Number of Pages: 64



Industrie Service

CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	PDD in GSP	Final PDD						
procedures as used for future monitoring?		generated times the emission factor. Hence, the projection should be made on the electricity generation estimated and the emission factor. Same for project emissions.								
B.6.3.2. Are the GHG calculations documented in a complete and transparent manner?	1,2	Yes. the GHG calculations are documented in a complete and transparent manner.	☑	☑						
B.6.3.3. Is the data provided in this section consistent with data as presented in other chapters of the PDD?	1,2	Yes they are consistent.	☑	☑						
B.6.3.4. Has the equation for calculating base-line emissions from electricity that is displaced by the project activity been used if project activity is use of waste pressure to generate electricity?	1,2	Check the methodology. If no waste pressure this question can be answered N/A	☑	☑						
B.6.3.5. Do the parameter of efficiency (nBL) follow one of the stated demands?	1,2	<table><tr><th>Demand</th><th>Yes/No</th></tr><tr><td>i) Assume a constant efficiency of the captive plant / element process / cogeneration plant and determine the efficiency, as a conservative approach, for optimal operation conditions i.e. design fuel, designed steam extraction, optimal load, optimal oxygen content in flue gases, adequate fuel conditioning (temperature, viscosity, moisture, size/mesh etc), representative or favorable ambient conditions (temperature and humidity); or</td><td></td></tr><tr><td>ii) Highest of the efficiency values provided by two or more manufacturers for power plants / element process with specifications similar to that that would have been required to supply the recipient</td><td></td></tr></table>	Demand	Yes/No	i) Assume a constant efficiency of the captive plant / element process / cogeneration plant and determine the efficiency, as a conservative approach, for optimal operation conditions i.e. design fuel, designed steam extraction, optimal load, optimal oxygen content in flue gases, adequate fuel conditioning (temperature, viscosity, moisture, size/mesh etc), representative or favorable ambient conditions (temperature and humidity); or		ii) Highest of the efficiency values provided by two or more manufacturers for power plants / element process with specifications similar to that that would have been required to supply the recipient		☑	☑
Demand	Yes/No									
i) Assume a constant efficiency of the captive plant / element process / cogeneration plant and determine the efficiency, as a conservative approach, for optimal operation conditions i.e. design fuel, designed steam extraction, optimal load, optimal oxygen content in flue gases, adequate fuel conditioning (temperature, viscosity, moisture, size/mesh etc), representative or favorable ambient conditions (temperature and humidity); or										
ii) Highest of the efficiency values provided by two or more manufacturers for power plants / element process with specifications similar to that that would have been required to supply the recipient										

Validation Protocol

Project Title: Hebei Wasted Gas based Captive Power Plant Project in Longgang Group

Date of Completion: 15th April 2009

Number of Pages: 64



Industrie Service

CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	PDD in GSP	Final PDD
		with electricity / heat / that it receives from the project activity; or Highest of the efficiency values provided by two or more manufacturers for similar plants, as used in the project activity; or		
		iii) Assume a captive power generation efficiency of 60% based on the net calorific values as a conservative approach (power plant); or Maximum efficiency of 100% (element process); or Maximum efficiency of 90%, based on net calorific values (irrespective of type of cogeneration system and type of heat generated) (cogeneration plant); or		
		iv) Estimated from load v/s efficiency curve(s) established for equipment(s) / each element process through measurement and described in Annex I; or Estimated from load v/s efficiency curve(s) established through measurement of the cogeneration plants and described in Annex I. Follow international standards for estimation of efficiency of power plants / individual element process / cogeneration plants.		
B.6.3.6.Are the baseline emissions capped following one of the two methods described in the methodology (ACM0012)? Which method has been applied?	1,2	Due to the proposed project activity consist of two components, one of which is waste gases based captive power plant, another one is a waste pressure based captive power plant. Therefore, Method-1 and Method-2 is adopted respectively.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Validation Protocol

Project Title: Hebei Wasted Gas based Captive Power Plant Project in Longgang Group

Date of Completion: 15th April 2009

Number of Pages: 64



Industrie Service

CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	PDD in GSP	Final PDD												
B.6.4. Summary of the ex-ante estimation of emission reductions																
B.6.4.1.Will the project result in fewer GHG emissions than the baseline scenario?	1,2	Yes. No doubt, the project result in fewer GHG emissions than the baseline scenario	☑	☑												
B.6.4.2.Is the form/table required for the indication of projected emission reductions correctly applied?	1,2	Yes. The form/table is correctly applied.	☑	☑												
B.6.4.3.Is the projection in line with the envisioned time schedule for the project's implementation and the indicated crediting period?	1,2	Yes. It is in line with the envisioned time schedule.	☑	☑												
B.6.4.4.Is the data provided in this section in consistency with data as presented in other chapters of the PDD?	1,2	Yes they are consistent.	☑	☑												
B.7. Application of the monitoring methodology and description of the monitoring plan																
B.7.1. Data and parameters monitored																
B.7.1.1.Is the list of parameters presented in chapter B.7.1 considered to be complete with regard to the requirements of the applied methodology?	1,2	Corrective Action Request No.14. Some parameters in the list are incomplete. Please add the parameters into the PDD, which is marked “No” in the following tables of the protocol.	CAR14	☑												
B.7.1.2.Parameter Title: FF_{i,y} , quantity of fossil fuel type i combusted to supplement waste gas in the project activity during the year y, in energy or mass units (project emissions)	1,2	<table><tr><th>Monitoring Checklist</th><th>Yes / No</th></tr><tr><td>Title in line with methodology?</td><td>Yes</td></tr><tr><td>Data unit correctly expressed?</td><td>Yes</td></tr><tr><td>Appropriate description of parameter?</td><td>Yes</td></tr><tr><td>Source clearly referenced?</td><td>Yes</td></tr><tr><td>Correct value provided for estimation?</td><td>Yes</td></tr></table>	Monitoring Checklist	Yes / No	Title in line with methodology?	Yes	Data unit correctly expressed?	Yes	Appropriate description of parameter?	Yes	Source clearly referenced?	Yes	Correct value provided for estimation?	Yes	☑	☑
Monitoring Checklist	Yes / No															
Title in line with methodology?	Yes															
Data unit correctly expressed?	Yes															
Appropriate description of parameter?	Yes															
Source clearly referenced?	Yes															
Correct value provided for estimation?	Yes															

Validation Protocol

Project Title: Hebei Wasted Gas based Captive Power Plant Project in Longgang Group

Date of Completion: 15th April 2009

Number of Pages: 64



Industrie Service

CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS		PDD in GSP	Final PDD																								
		Has this value been verified?	Yes																										
		Measurement method correctly described?	Yes																										
		Correct reference to standards?	Yes																										
		Indication of accuracy provided?	Yes																										
		QA/QC procedures described?	Yes																										
		QA/QC procedures appropriate?	Yes																										
B.7.1.3.Parameter Title: NCV_i net calorific value of the fossil fuel I (project emissions)	1,2	<table><tr><th>Monitoring Checklist</th><th>Yes / No</th></tr><tr><td>Title in line with methodology?</td><td>Yes</td></tr><tr><td>Data unit correctly expressed?</td><td>Yes</td></tr><tr><td>Appropriate description of parameter?</td><td>Yes</td></tr><tr><td>Source clearly referenced?</td><td>Yes</td></tr><tr><td>Correct value provided for estimation?</td><td>Yes</td></tr><tr><td>Has this value been verified?</td><td>Yes</td></tr><tr><td>Measurement method correctly described?</td><td>Yes</td></tr><tr><td>Correct reference to standards?</td><td>Yes</td></tr><tr><td>Indication of accuracy provided?</td><td>Yes</td></tr><tr><td>QA/QC procedures described?</td><td>Yes</td></tr><tr><td>QA/QC procedures appropriate?</td><td>Yes</td></tr></table>		Monitoring Checklist	Yes / No	Title in line with methodology?	Yes	Data unit correctly expressed?	Yes	Appropriate description of parameter?	Yes	Source clearly referenced?	Yes	Correct value provided for estimation?	Yes	Has this value been verified?	Yes	Measurement method correctly described?	Yes	Correct reference to standards?	Yes	Indication of accuracy provided?	Yes	QA/QC procedures described?	Yes	QA/QC procedures appropriate?	Yes	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Monitoring Checklist	Yes / No																												
Title in line with methodology?	Yes																												
Data unit correctly expressed?	Yes																												
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Source clearly referenced?	Yes																												
Correct value provided for estimation?	Yes																												
Has this value been verified?	Yes																												
Measurement method correctly described?	Yes																												
Correct reference to standards?	Yes																												
Indication of accuracy provided?	Yes																												
QA/QC procedures described?	Yes																												
QA/QC procedures appropriate?	Yes																												
B.7.1.4.Parameter Title: EFCO_{2, i} CO2 emission factor per unit of energy or mass of the fuel type i (project emissions)	1,2	<table><tr><th>Monitoring Checklist</th><th>Yes / No</th></tr><tr><td>Title in line with methodology?</td><td>NA</td></tr><tr><td>Data unit correctly expressed?</td><td>NA</td></tr><tr><td>Appropriate description of parameter?</td><td>NA</td></tr><tr><td>Source clearly referenced?</td><td>NA</td></tr><tr><td>Correct value provided for estimation?</td><td>NA</td></tr><tr><td>Has this value been verified?</td><td>NA</td></tr><tr><td>Measurement method correctly described?</td><td>NA</td></tr><tr><td>Correct reference to standards?</td><td>NA</td></tr></table>		Monitoring Checklist	Yes / No	Title in line with methodology?	NA	Data unit correctly expressed?	NA	Appropriate description of parameter?	NA	Source clearly referenced?	NA	Correct value provided for estimation?	NA	Has this value been verified?	NA	Measurement method correctly described?	NA	Correct reference to standards?	NA	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>						
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Validation Protocol

Project Title: Hebei Wasted Gas based Captive Power Plant Project in Longgang Group

Date of Completion: 15th April 2009

Number of Pages: 64



Industrie Service

CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS		PDD in GSP	Final PDD																								
		Indication of accuracy provided?	NA																										
		QA/QC procedures described?	NA																										
		QA/QC procedures appropriate?	NA																										
B.7.1.5.Parameter Title: ECPJ, y Additional electricity consumed in year y, for gas cleaning equipment, as a result of the implementation of the project activity. (project emissions)	1,2	<table><tr><th>Monitoring Checklist</th><th>Yes / No</th></tr><tr><td>Title in line with methodology?</td><td>NA</td></tr><tr><td>Data unit correctly expressed?</td><td>NA</td></tr><tr><td>Appropriate description of parameter?</td><td>NA</td></tr><tr><td>Source clearly referenced?</td><td>NA</td></tr><tr><td>Correct value provided for estimation?</td><td>NA</td></tr><tr><td>Has this value been verified?</td><td>NA</td></tr><tr><td>Measurement method correctly described?</td><td>NA</td></tr><tr><td>Correct reference to standards?</td><td>NA</td></tr><tr><td>Indication of accuracy provided?</td><td>NA</td></tr><tr><td>QA/QC procedures described?</td><td>NA</td></tr><tr><td>QA/QC procedures appropriate?</td><td>NA</td></tr></table>		Monitoring Checklist	Yes / No	Title in line with methodology?	NA	Data unit correctly expressed?	NA	Appropriate description of parameter?	NA	Source clearly referenced?	NA	Correct value provided for estimation?	NA	Has this value been verified?	NA	Measurement method correctly described?	NA	Correct reference to standards?	NA	Indication of accuracy provided?	NA	QA/QC procedures described?	NA	QA/QC procedures appropriate?	NA	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
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Measurement method correctly described?	NA																												
Correct reference to standards?	NA																												
Indication of accuracy provided?	NA																												
QA/QC procedures described?	NA																												
QA/QC procedures appropriate?	NA																												
B.7.1.6.Parameter Title: EFCO2, EL, y CO2 emission factor for electricity consumed by the project activity in year y (project emissions)	1,2	<table><tr><th>Monitoring Checklist</th><th>Yes / No</th></tr><tr><td>Title in line with methodology?</td><td>No</td></tr><tr><td>Data unit correctly expressed?</td><td>No</td></tr><tr><td>Appropriate description of parameter?</td><td>No</td></tr><tr><td>Source clearly referenced?</td><td>No</td></tr><tr><td>Correct value provided for estimation?</td><td>No</td></tr><tr><td>Has this value been verified?</td><td>No</td></tr><tr><td>Measurement method correctly described?</td><td>No</td></tr><tr><td>Correct reference to standards?</td><td>No</td></tr><tr><td>Indication of accuracy provided?</td><td>No</td></tr><tr><td>QA/QC procedures described?</td><td>No</td></tr><tr><td>QA/QC procedures appropriate?</td><td>No</td></tr></table>		Monitoring Checklist	Yes / No	Title in line with methodology?	No	Data unit correctly expressed?	No	Appropriate description of parameter?	No	Source clearly referenced?	No	Correct value provided for estimation?	No	Has this value been verified?	No	Measurement method correctly described?	No	Correct reference to standards?	No	Indication of accuracy provided?	No	QA/QC procedures described?	No	QA/QC procedures appropriate?	No	CAR14	<input checked="" type="checkbox"/>
Monitoring Checklist	Yes / No																												
Title in line with methodology?	No																												
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Validation Protocol

Project Title: Hebei Wasted Gas based Captive Power Plant Project in Longgang Group

Date of Completion: 15th April 2009

Number of Pages: 64



Industrie Service

CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS		PDD in GSP	Final PDD																								
B.7.1.7.Parameter Title: $FC_{EL, CP, k, y}$ Quantity of fuel type k combusted in the captive power plant at the project site in year y where k are the fuel types fired in the captive power plant at the project site in year y (project emissions)	1,2	<table><tr><th>Monitoring Checklist</th><th>Yes / No</th></tr><tr><td>Title in line with methodology?</td><td>NA</td></tr><tr><td>Data unit correctly expressed?</td><td>NA</td></tr><tr><td>Appropriate description of parameter?</td><td>NA</td></tr><tr><td>Source clearly referenced?</td><td>NA</td></tr><tr><td>Correct value provided for estimation?</td><td>NA</td></tr><tr><td>Has this value been verified?</td><td>NA</td></tr><tr><td>Measurement method correctly described?</td><td>NA</td></tr><tr><td>Correct reference to standards?</td><td>NA</td></tr><tr><td>Indication of accuracy provided?</td><td>NA</td></tr><tr><td>QA/QC procedures described?</td><td>NA</td></tr><tr><td>QA/QC procedures appropriate?</td><td>NA</td></tr></table>		Monitoring Checklist	Yes / No	Title in line with methodology?	NA	Data unit correctly expressed?	NA	Appropriate description of parameter?	NA	Source clearly referenced?	NA	Correct value provided for estimation?	NA	Has this value been verified?	NA	Measurement method correctly described?	NA	Correct reference to standards?	NA	Indication of accuracy provided?	NA	QA/QC procedures described?	NA	QA/QC procedures appropriate?	NA	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
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Has this value been verified?	NA																												
Measurement method correctly described?	NA																												
Correct reference to standards?	NA																												
Indication of accuracy provided?	NA																												
QA/QC procedures described?	NA																												
QA/QC procedures appropriate?	NA																												
B.7.1.8.Parameter Title: NCV_k Net calorific value of fuel type k where k are the fuel types fired in the captive power plant at the project site in year y (project emissions)	1,2	<table><tr><th>Monitoring Checklist</th><th>Yes / No</th></tr><tr><td>Title in line with methodology?</td><td>NA</td></tr><tr><td>Data unit correctly expressed?</td><td>NA</td></tr><tr><td>Appropriate description of parameter?</td><td>NA</td></tr><tr><td>Source clearly referenced?</td><td>NA</td></tr><tr><td>Correct value provided for estimation?</td><td>NA</td></tr><tr><td>Has this value been verified?</td><td>NA</td></tr><tr><td>Measurement method correctly described?</td><td>NA</td></tr><tr><td>Correct reference to standards?</td><td>NA</td></tr><tr><td>Indication of accuracy provided?</td><td>NA</td></tr><tr><td>QA/QC procedures described?</td><td>NA</td></tr><tr><td>QA/QC procedures appropriate?</td><td>NA</td></tr></table>		Monitoring Checklist	Yes / No	Title in line with methodology?	NA	Data unit correctly expressed?	NA	Appropriate description of parameter?	NA	Source clearly referenced?	NA	Correct value provided for estimation?	NA	Has this value been verified?	NA	Measurement method correctly described?	NA	Correct reference to standards?	NA	Indication of accuracy provided?	NA	QA/QC procedures described?	NA	QA/QC procedures appropriate?	NA	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Monitoring Checklist	Yes / No																												
Title in line with methodology?	NA																												
Data unit correctly expressed?	NA																												
Appropriate description of parameter?	NA																												
Source clearly referenced?	NA																												
Correct value provided for estimation?	NA																												
Has this value been verified?	NA																												
Measurement method correctly described?	NA																												
Correct reference to standards?	NA																												
Indication of accuracy provided?	NA																												
QA/QC procedures described?	NA																												
QA/QC procedures appropriate?	NA																												
B.7.1.9.Parameter Title: $EF_{CO_2, k}$ Emission factor of fuel type k where k are the fuel types fired in the captive power plant	1,2	<table><tr><th>Monitoring Checklist</th><th>Yes / No</th></tr><tr><td>Title in line with methodology?</td><td>NA</td></tr><tr><td>Data unit correctly expressed?</td><td>NA</td></tr></table>		Monitoring Checklist	Yes / No	Title in line with methodology?	NA	Data unit correctly expressed?	NA	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>																		
Monitoring Checklist	Yes / No																												
Title in line with methodology?	NA																												
Data unit correctly expressed?	NA																												

Validation Protocol

Project Title: Hebei Wasted Gas based Captive Power Plant Project in Longgang Group

Date of Completion: 15th April 2009

Number of Pages: 64



Industrie Service

CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS		PDD in GSP	Final PDD
at the project site in year y (project emissions)		Appropriate description of parameter?	NA		
		Source clearly referenced?	NA		
		Correct value provided for estimation?	NA		
		Has this value been verified?	NA		
		Measurement method correctly described?	NA		
		Correct reference to standards?	NA		
		Indication of accuracy provided?	NA		
		QA/QC procedures described?	NA		
		QA/QC procedures appropriate?	NA		
B.7.1.10. Parameter Title: $EC_{CP,y}$ Quantity of electricity generated in the captive power plant at the project site in year y (project emissions)	1,2			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
		Monitoring Checklist	Yes / No		
		Title in line with methodology?	Yes		
		Data unit correctly expressed?	Yes		
		Appropriate description of parameter?	Yes		
		Source clearly referenced?	Yes		
		Correct value provided for estimation?	Yes		
		Has this value been verified?	Yes		
		Measurement method correctly described?	Yes		
		Correct reference to standards?	Yes		
		Indication of accuracy provided?	Yes		
		QA/QC procedures described?	Yes		
		QA/QC procedures appropriate?	Yes		
B.7.1.11. Parameter Title: $WS_{i,j}$ fraction of total heat that is used by the recipient j in the project that in absence of the project activity would have been supplied by the ith boiler (baseline emissions)	1,2			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
		Monitoring Checklist	Yes / No		
		Title in line with methodology?	NA		
		Data unit correctly expressed?	NA		
		Appropriate description of parameter?	NA		
		Source clearly referenced?	NA		
		Correct value provided for estimation?	NA		

Validation Protocol

Project Title: Hebei Wasted Gas based Captive Power Plant Project in Longgang Group

Date of Completion: 15th April 2009

Number of Pages: 64



Industrie Service

CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS		PDD in GSP	Final PDD
		Has this value been verified?	NA		
		Measurement method correctly described?	NA		
		Correct reference to standards?	NA		
		Indication of accuracy provided?	NA		
		QA/QC procedures described?	NA		
		QA/QC procedures appropriate?	NA		
B.7.1.12. Parameter Title: $Q_{WG,y}$ quantity of waste gas used for energy generation during year y (Nm3) (baseline emissions)	1,2			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
		Monitoring Checklist	Yes / No		
		Title in line with methodology?	Yes		
		Data unit correctly expressed?	Yes		
		Appropriate description of parameter?	Yes		
		Source clearly referenced?	Yes		
		Correct value provided for estimation?	Yes		
		Has this value been verified?	Yes		
		Measurement method correctly described?	Yes		
		Correct reference to standards?	Yes		
		Indication of accuracy provided?	Yes		
		QA/QC procedures described?	Yes		
		QA/QC procedures appropriate?	Yes		
B.7.1.13. Parameter Title: $EF_{elec,i,j}$ CO ₂ emission factor for the electricity source i (i=gr (grid) or i=is (identified source)) , displaced due to the project activity, during the year y in tons CO2/MWh (baseline emissions)	1,2			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
		Monitoring Checklist	Yes / No		
		Title in line with methodology?	NA		
		Data unit correctly expressed?	NA		
		Appropriate description of parameter?	NA		
		Source clearly referenced?	NA		
		Correct value provided for estimation?	NA		
		Has this value been verified?	NA		
		Measurement method correctly described?	NA		
		Correct reference to standards?	NA		

Validation Protocol

Project Title: Hebei Wasted Gas based Captive Power Plant Project in Longgang Group

Date of Completion: 15th April 2009

Number of Pages: 64



Industrie Service

CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS		PDD in GSP	Final PDD																								
		Indication of accuracy provided?	NA																										
		QA/QC procedures described?	NA																										
		QA/QC procedures appropriate?	NA																										
B.7.1.14. Parameter Title: EF_{CO2, is, j} CO ₂ emission factor per unit of energy of the fossil fuel used in the baseline generation source i (i=is) providing energy to recipient j. (baseline emissions)	1,2	<table><tr><th>Monitoring Checklist</th><th>Yes / No</th></tr><tr><td>Title in line with methodology?</td><td>NA</td></tr><tr><td>Data unit correctly expressed?</td><td>NA</td></tr><tr><td>Appropriate description of parameter?</td><td>NA</td></tr><tr><td>Source clearly referenced?</td><td>NA</td></tr><tr><td>Correct value provided for estimation?</td><td>NA</td></tr><tr><td>Has this value been verified?</td><td>NA</td></tr><tr><td>Measurement method correctly described?</td><td>NA</td></tr><tr><td>Correct reference to standards?</td><td>NA</td></tr><tr><td>Indication of accuracy provided?</td><td>NA</td></tr><tr><td>QA/QC procedures described?</td><td>NA</td></tr><tr><td>QA/QC procedures appropriate?</td><td>NA</td></tr></table>		Monitoring Checklist	Yes / No	Title in line with methodology?	NA	Data unit correctly expressed?	NA	Appropriate description of parameter?	NA	Source clearly referenced?	NA	Correct value provided for estimation?	NA	Has this value been verified?	NA	Measurement method correctly described?	NA	Correct reference to standards?	NA	Indication of accuracy provided?	NA	QA/QC procedures described?	NA	QA/QC procedures appropriate?	NA	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Monitoring Checklist	Yes / No																												
Title in line with methodology?	NA																												
Data unit correctly expressed?	NA																												
Appropriate description of parameter?	NA																												
Source clearly referenced?	NA																												
Correct value provided for estimation?	NA																												
Has this value been verified?	NA																												
Measurement method correctly described?	NA																												
Correct reference to standards?	NA																												
Indication of accuracy provided?	NA																												
QA/QC procedures described?	NA																												
QA/QC procedures appropriate?	NA																												
B.7.1.15. Parameter Title: EF_{CO2, COGEN} CO ₂ emission factor per unit of energy of the fuel that would have been used in the base-line cogeneration plant (baseline emissions)	1,2	<table><tr><th>Monitoring Checklist</th><th>Yes / No</th></tr><tr><td>Title in line with methodology?</td><td>NA</td></tr><tr><td>Data unit correctly expressed?</td><td>NA</td></tr><tr><td>Appropriate description of parameter?</td><td>NA</td></tr><tr><td>Source clearly referenced?</td><td>NA</td></tr><tr><td>Correct value provided for estimation?</td><td>NA</td></tr><tr><td>Has this value been verified?</td><td>NA</td></tr><tr><td>Measurement method correctly described?</td><td>NA</td></tr><tr><td>Correct reference to standards?</td><td>NA</td></tr><tr><td>Indication of accuracy provided?</td><td>NA</td></tr><tr><td>QA/QC procedures described?</td><td>NA</td></tr><tr><td>QA/QC procedures appropriate?</td><td>NA</td></tr></table>		Monitoring Checklist	Yes / No	Title in line with methodology?	NA	Data unit correctly expressed?	NA	Appropriate description of parameter?	NA	Source clearly referenced?	NA	Correct value provided for estimation?	NA	Has this value been verified?	NA	Measurement method correctly described?	NA	Correct reference to standards?	NA	Indication of accuracy provided?	NA	QA/QC procedures described?	NA	QA/QC procedures appropriate?	NA	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Monitoring Checklist	Yes / No																												
Title in line with methodology?	NA																												
Data unit correctly expressed?	NA																												
Appropriate description of parameter?	NA																												
Source clearly referenced?	NA																												
Correct value provided for estimation?	NA																												
Has this value been verified?	NA																												
Measurement method correctly described?	NA																												
Correct reference to standards?	NA																												
Indication of accuracy provided?	NA																												
QA/QC procedures described?	NA																												
QA/QC procedures appropriate?	NA																												

Validation Protocol

Project Title: Hebei Wasted Gas based Captive Power Plant Project in Longgang Group

Date of Completion: 15th April 2009

Number of Pages: 64



Industrie Service

CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	PDD in GSP	Final PDD																								
B.7.1.16. Parameter Title: EG_{i,j,y} quantity of electricity supplied to the recipient j by generator, which in the absence of the project activity would have sourced from l th source /l can be either grid or identified source) during the year y in MWh (baseline emissions)	1,2	<table><tr><th>Monitoring Checklist</th><th>Yes / No</th></tr><tr><td>Title in line with methodology?</td><td>Yes</td></tr><tr><td>Data unit correctly expressed?</td><td>Yes</td></tr><tr><td>Appropriate description of parameter?</td><td>Yes</td></tr><tr><td>Source clearly referenced?</td><td>Yes</td></tr><tr><td>Correct value provided for estimation?</td><td>Yes</td></tr><tr><td>Has this value been verified?</td><td>Yes</td></tr><tr><td>Measurement method correctly described?</td><td>Yes</td></tr><tr><td>Correct reference to standards?</td><td>Yes</td></tr><tr><td>Indication of accuracy provided?</td><td>Yes</td></tr><tr><td>QA/QC procedures described?</td><td>Yes</td></tr><tr><td>QA/QC procedures appropriate?</td><td>Yes</td></tr></table>	Monitoring Checklist	Yes / No	Title in line with methodology?	Yes	Data unit correctly expressed?	Yes	Appropriate description of parameter?	Yes	Source clearly referenced?	Yes	Correct value provided for estimation?	Yes	Has this value been verified?	Yes	Measurement method correctly described?	Yes	Correct reference to standards?	Yes	Indication of accuracy provided?	Yes	QA/QC procedures described?	Yes	QA/QC procedures appropriate?	Yes	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Monitoring Checklist	Yes / No																											
Title in line with methodology?	Yes																											
Data unit correctly expressed?	Yes																											
Appropriate description of parameter?	Yes																											
Source clearly referenced?	Yes																											
Correct value provided for estimation?	Yes																											
Has this value been verified?	Yes																											
Measurement method correctly described?	Yes																											
Correct reference to standards?	Yes																											
Indication of accuracy provided?	Yes																											
QA/QC procedures described?	Yes																											
QA/QC procedures appropriate?	Yes																											
B.7.1.17. Parameter Title: EG_{j,y} quantity of electricity supplied to the recipient plant j by the project activity during the year y in MWh (baseline emissions)	1,2	<table><tr><th>Monitoring Checklist</th><th>Yes / No</th></tr><tr><td>Title in line with methodology?</td><td>Yes</td></tr><tr><td>Data unit correctly expressed?</td><td>Yes</td></tr><tr><td>Appropriate description of parameter?</td><td>Yes</td></tr><tr><td>Source clearly referenced?</td><td>Yes</td></tr><tr><td>Correct value provided for estimation?</td><td>Yes</td></tr><tr><td>Has this value been verified?</td><td>Yes</td></tr><tr><td>Measurement method correctly described?</td><td>Yes</td></tr><tr><td>Correct reference to standards?</td><td>Yes</td></tr><tr><td>Indication of accuracy provided?</td><td>Yes</td></tr><tr><td>QA/QC procedures described?</td><td>Yes</td></tr><tr><td>QA/QC procedures appropriate?</td><td>Yes</td></tr></table>	Monitoring Checklist	Yes / No	Title in line with methodology?	Yes	Data unit correctly expressed?	Yes	Appropriate description of parameter?	Yes	Source clearly referenced?	Yes	Correct value provided for estimation?	Yes	Has this value been verified?	Yes	Measurement method correctly described?	Yes	Correct reference to standards?	Yes	Indication of accuracy provided?	Yes	QA/QC procedures described?	Yes	QA/QC procedures appropriate?	Yes	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Monitoring Checklist	Yes / No																											
Title in line with methodology?	Yes																											
Data unit correctly expressed?	Yes																											
Appropriate description of parameter?	Yes																											
Source clearly referenced?	Yes																											
Correct value provided for estimation?	Yes																											
Has this value been verified?	Yes																											
Measurement method correctly described?	Yes																											
Correct reference to standards?	Yes																											
Indication of accuracy provided?	Yes																											
QA/QC procedures described?	Yes																											
QA/QC procedures appropriate?	Yes																											
B.7.1.18. Parameter Title: HG_{j,y} net quantity of heat supplied to the recipient plant j by the project activity during the year	1,2	<table><tr><th>Monitoring Checklist</th><th>Yes / No</th></tr><tr><td>Title in line with methodology?</td><td>NA</td></tr></table>	Monitoring Checklist	Yes / No	Title in line with methodology?	NA	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>																				
Monitoring Checklist	Yes / No																											
Title in line with methodology?	NA																											

Validation Protocol

Project Title: Hebei Wasted Gas based Captive Power Plant Project in Longgang Group

Date of Completion: 15th April 2009

Number of Pages: 64



Industrie Service

CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS		PDD in GSP	Final PDD																								
y in TJ. In case of steam this is expressed as difference of energy content between the steam supplied to the recipient plant and the condensate returned by the recipient plant(s) to element process of cogeneration plant. In case of hot water/oil this is expressed as difference in energy content between the hot water/oil supplied to and returned by the recipient plant(s) to element process of cogeneration plant) (baseline emissions)		Data unit correctly expressed?	NA																										
		Appropriate description of parameter?	NA																										
		Source clearly referenced?	NA																										
		Correct value provided for estimation?	NA																										
		Has this value been verified?	NA																										
		Measurement method correctly described?	NA																										
		Correct reference to standards?	NA																										
		Indication of accuracy provided?	NA																										
		QA/QC procedures described?	NA																										
		QA/QC procedures appropriate?	NA																										
B.7.1.19. Parameter Title: EF _{CO₂, i, j} CO ₂ emission factor per unit of energy of the baseline fuel used in ith boiler used by recipient j, in tCO ₂ /TJ, in absence of the project activity (baseline emissions)	1,2	<table><tr><th>Monitoring Checklist</th><th>Yes / No</th></tr><tr><td>Title in line with methodology?</td><td>NA</td></tr><tr><td>Data unit correctly expressed?</td><td>NA</td></tr><tr><td>Appropriate description of parameter?</td><td>NA</td></tr><tr><td>Source clearly referenced?</td><td>NA</td></tr><tr><td>Correct value provided for estimation?</td><td>NA</td></tr><tr><td>Has this value been verified?</td><td>NA</td></tr><tr><td>Measurement method correctly described?</td><td>NA</td></tr><tr><td>Correct reference to standards?</td><td>NA</td></tr><tr><td>Indication of accuracy provided?</td><td>NA</td></tr><tr><td>QA/QC procedures described?</td><td>NA</td></tr><tr><td>QA/QC procedures appropriate?</td><td>NA</td></tr></table>		Monitoring Checklist	Yes / No	Title in line with methodology?	NA	Data unit correctly expressed?	NA	Appropriate description of parameter?	NA	Source clearly referenced?	NA	Correct value provided for estimation?	NA	Has this value been verified?	NA	Measurement method correctly described?	NA	Correct reference to standards?	NA	Indication of accuracy provided?	NA	QA/QC procedures described?	NA	QA/QC procedures appropriate?	NA	☑	☑
Monitoring Checklist	Yes / No																												
Title in line with methodology?	NA																												
Data unit correctly expressed?	NA																												
Appropriate description of parameter?	NA																												
Source clearly referenced?	NA																												
Correct value provided for estimation?	NA																												
Has this value been verified?	NA																												
Measurement method correctly described?	NA																												
Correct reference to standards?	NA																												
Indication of accuracy provided?	NA																												
QA/QC procedures described?	NA																												
QA/QC procedures appropriate?	NA																												
B.7.1.20. Parameter Title: EFCO ₂ , j CO ₂ emission factor of fossil fuel (tCO ₂ /TJ) that would have been used at facility 'j' for flaring the waste gas (baseline emissions)	1,2	<table><tr><th>Monitoring Checklist</th><th>Yes / No</th></tr><tr><td>Title in line with methodology?</td><td>NA</td></tr><tr><td>Data unit correctly expressed?</td><td>NA</td></tr><tr><td>Appropriate description of parameter?</td><td>NA</td></tr><tr><td>Source clearly referenced?</td><td>NA</td></tr></table>		Monitoring Checklist	Yes / No	Title in line with methodology?	NA	Data unit correctly expressed?	NA	Appropriate description of parameter?	NA	Source clearly referenced?	NA	☑	☑														
Monitoring Checklist	Yes / No																												
Title in line with methodology?	NA																												
Data unit correctly expressed?	NA																												
Appropriate description of parameter?	NA																												
Source clearly referenced?	NA																												

Validation Protocol

Project Title: Hebei Wasted Gas based Captive Power Plant Project in Longgang Group

Date of Completion: 15th April 2009

Number of Pages: 64



Industrie Service

CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS		PDD in GSP	Final PDD
		Correct value provided for estimation?	NA		
		Has this value been verified?	NA		
		Measurement method correctly described?	NA		
		Correct reference to standards?	NA		
		Indication of accuracy provided?	NA		
		QA/QC procedures described?	NA		
		QA/QC procedures appropriate?	NA		
B.7.1.21. Parameter Title: Q_i, h amount of individual fuel (waste gas and other fuel(s)) i consumed at the energy generation unit during hour h (baseline emissions)	1,2	Monitoring Checklist	Yes / No	See CAR14	<input checked="" type="checkbox"/>
		Title in line with methodology?	No		
		Data unit correctly expressed?	No		
		Appropriate description of parameter?	No		
		Source clearly referenced?	No		
		Correct value provided for estimation?	No		
		Has this value been verified?	No		
		Measurement method correctly described?	No		
		Correct reference to standards?	No		
		Indication of accuracy provided?	No		
		QA/QC procedures described?	No		
		QA/QC procedures appropriate?	No		
B.7.1.22. Parameter Title: $EG_{tot, y}$ total annual energy produced at the cogeneration plants, with waste gas and fossil fuel (baseline emissions)	1,2	Monitoring Checklist	Yes / No	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
		Title in line with methodology?	NA		
		Data unit correctly expressed?	NA		
		Appropriate description of parameter?	NA		
		Source clearly referenced?	NA		
		Correct value provided for estimation?	NA		
		Has this value been verified?	NA		
		Measurement method correctly described?	NA		

Validation Protocol

Project Title: Hebei Wasted Gas based Captive Power Plant Project in Longgang Group

Date of Completion: 15th April 2009

Number of Pages: 64



Industrie Service

CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS		PDD in GSP	Final PDD
		Correct reference to standards?	NA		
		Indication of accuracy provided?	NA		
		QA/QC procedures described?	NA		
		QA/QC procedures appropriate?	NA		
B.7.1.23. Parameter Title: $Q_{WG, h}$ quantity of waste gas used for energy generation per hour h (baseline emissions)	1,2	Monitoring Checklist	Yes / No	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
		Title in line with methodology?	Yes		
		Data unit correctly expressed?	Yes		
		Appropriate description of parameter?	Yes		
		Source clearly referenced?	Yes		
		Correct value provided for estimation?	Yes		
		Has this value been verified?	Yes		
		Measurement method correctly described?	Yes		
		Correct reference to standards?	Yes		
		Indication of accuracy provided?	Yes		
		QA/QC procedures described?	Yes		
		QA/QC procedures appropriate?	Yes		
B.7.1.24. Parameter Title: NCV_{WG} net Calorific Value of Waste Gas (baseline emissions)	1,2	Monitoring Checklist	Yes / No	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
		Title in line with methodology?	Yes		
		Data unit correctly expressed?	Yes		
		Appropriate description of parameter?	Yes		
		Source clearly referenced?	Yes		
		Correct value provided for estimation?	Yes		
		Has this value been verified?	Yes		
		Measurement method correctly described?	Yes		
		Correct reference to standards?	Yes		
		Indication of accuracy provided?	Yes		
		QA/QC procedures described?	Yes		
		QA/QC procedures appropriate?	Yes		
B.7.1.25. Parameter Title: $ST_{whr, y}$ energy content of the steam generated in	1,2			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Validation Protocol

Project Title: Hebei Wasted Gas based Captive Power Plant Project in Longgang Group

Date of Completion: 15th April 2009

Number of Pages: 64



Industrie Service

CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS		PDD in GSP	Final PDD
waste heat recovery boiler fed to turbine via common steam header (baseline emissions)		Monitoring Checklist	Yes / No		
		Title in line with methodology?	NA		
		Data unit correctly expressed?	NA		
		Appropriate description of parameter?	NA		
		Source clearly referenced?	NA		
		Correct value provided for estimation?	NA		
		Has this value been verified?	NA		
		Measurement method correctly described?	NA		
		Correct reference to standards?	NA		
		Indication of accuracy provided?	NA		
		QA/QC procedures described?	NA		
		QA/QC procedures appropriate?	NA		
B.7.1.26. Parameter Title: $ST_{other, y}$ energy content of the steam generated in other boilers fed to turbine via common steam header (baseline emissions)	1,2	Monitoring Checklist	Yes / No	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
		Title in line with methodology?	NA		
		Data unit correctly expressed?	NA		
		Appropriate description of parameter?	NA		
		Source clearly referenced?	NA		
		Correct value provided for estimation?	NA		
		Has this value been verified?	NA		
		Measurement method correctly described?	NA		
		Correct reference to standards?	NA		
		Indication of accuracy provided?	NA		
		QA/QC procedures described?	NA		
		QA/QC procedures appropriate?	NA		
B.7.1.27. Parameter Title: $EF_{heat, j, y}$ CO2 emission factor of the heat source that would have supplied the recipient plant j in absence of the project activity, expressed in tCO2/TJ	1,2	Monitoring Checklist	Yes / No	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
		Title in line with methodology?	NA		
		Data unit correctly expressed?	NA		
		Appropriate description of parameter?	NA		
		Source clearly referenced?	NA		

Validation Protocol

Project Title: Hebei Wasted Gas based Captive Power Plant Project in Longgang Group

Date of Completion: 15th April 2009

Number of Pages: 64



Industrie Service

CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS		PDD in GSP	Final PDD
(baseline emissions)		Correct value provided for estimation?	NA		
		Has this value been verified?	NA		
		Measurement method correctly described?	NA		
		Correct reference to standards?	NA		
		Indication of accuracy provided?	NA		
		QA/QC procedures described?	NA		
		QA/QC procedures appropriate?	NA		
B.7.1.28. Parameter Title: steam flow rate	1,2	Monitoring Checklist	Yes / No	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
		Title in line with methodology?	NA		
		Data unit correctly expressed?	NA		
		Appropriate description of parameter?	NA		
		Source clearly referenced?	NA		
		Correct value provided for estimation?	NA		
		Has this value been verified?	NA		
		Measurement method correctly described?	NA		
		Correct reference to standards?	NA		
		Indication of accuracy provided?	NA		
		QA/QC procedures described?	NA		
		QA/QC procedures appropriate?	NA		
B.7.1.29. Parameter Title: pressure of steam	1,2	Monitoring Checklist	Yes / No	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
		Title in line with methodology?	NA		
		Data unit correctly expressed?	NA		
		Appropriate description of parameter?	NA		
		Source clearly referenced?	NA		
		Correct value provided for estimation?	NA		
		Has this value been verified?	NA		
		Measurement method correctly described?	NA		
		Correct reference to standards?	NA		
		Indication of accuracy provided?	NA		
		QA/QC procedures described?	NA		

Validation Protocol

Project Title: Hebei Wasted Gas based Captive Power Plant Project in Longgang Group

Date of Completion: 15th April 2009

Number of Pages: 64



Industrie Service

CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS		PDD in GSP	Final PDD
		QA/QC procedures appropriate?	NA		
B.7.1.30. Parameter Title: temperature of steam/hot water/hot oil	1,2	Monitoring Checklist	Yes / No	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
		Title in line with methodology?	NA		
		Data unit correctly expressed?	NA		
		Appropriate description of parameter?	NA		
		Source clearly referenced?	NA		
		Correct value provided for estimation?	NA		
		Has this value been verified?	NA		
		Measurement method correctly described?	NA		
		Correct reference to standards?	NA		
		Indication of accuracy provided?	NA		
		QA/QC procedures described?	NA		
		QA/QC procedures appropriate?	NA		
B.7.1.31. Parameter Title: nBL, t efficiency of element process/captive power plant/cogeneration plant during time interval t where t is a discrete time interval during the year y (baseline emissions)	1,2	Monitoring Checklist	Yes / No	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
		Title in line with methodology?	NA		
		Data unit correctly expressed?	NA		
		Appropriate description of parameter?	NA		
		Source clearly referenced?	NA		
		Correct value provided for estimation?	NA		
		Has this value been verified?	NA		
		Measurement method correctly described?	NA		
		Correct reference to standards?	NA		
		Indication of accuracy provided?	NA		
		QA/QC procedures described?	NA		
		QA/QC procedures appropriate?	NA		
B.7.2. Description of the monitoring plan					
B.7.2.1.Is the operational and management structure clearly described and in compliance with the envisioned situation?	1,2	Yes. The operational and management structure is clearly de- scribed and in compliance with the envisioned situation		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Validation Protocol

Project Title: Hebei Wasted Gas based Captive Power Plant Project in Longgang Group

Date of Completion: 15th April 2009

Number of Pages: 64



Industrie Service

CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	PDD in GSP	Final PDD
B.7.2.2.Are responsibilities and institutional arrangements for data collection and archiving clearly provided?	1,2	Yes. They are provided clearly in the section B. 7.2	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
B.7.2.3.Does the monitoring plan provide current good monitoring practice?	1,2	<u>Corrective Action Request No.15.</u> The ammeters diagram should be revised according to the actual situation.	CAR15	<input checked="" type="checkbox"/>
B.7.2.4.If applicable: Does annex 4 provide useful information enabling a better understanding of the envisioned monitoring provisions?	1,2	No addition information is provided in annex 4.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
B.8. Date of completion of the application of the baseline study and monitoring methodology an the name of the responsible person(s)/entity(ies)				
B.8.1.1.Is there any indication of a date when the baseline was determined?	1,2	Yes. The application of the baseline study and monitoring methodology of the Project was completed on 10/12/2007 by KOE Environmental Consulting, Inc. (Japan)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
B.8.1.2.Is this consistent with the time line of the PDD history?	1,2	Yes. The PDD is completed on the same day. They are consistent.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
B.8.1.3.Is the information on the person(s) / entity(ies) responsible for the application of the baseline and monitoring methodology provided consistent with the actual situation?	1,2	Yes. They are consistent.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
B.8.1.4.Is information provided whether this person / entity is also considered a project participant?	1,2	Yes. The entity is not project participant listed in Annex 1.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Validation Protocol

Project Title: Hebei Wasted Gas based Captive Power Plant Project in Longgang Group

Date of Completion: 15th April 2009

Number of Pages: 64



Industrie Service

CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	PDD in GSP	Final PDD
C. Duration of the project activity / crediting period				
C.1. Duration of the project activity				
C.1.1. Are the project's starting date and operational lifetime clearly defined and reasonable?	1,2	Yes. The starting date is on 2007/07/01. The operation life time is expected as 20 years. They are reasonable.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
C.2. Choice of the crediting period and related information				
C.2.1. Is the assumed crediting time clearly defined and reasonable (renewable crediting period of max 7 years with potential for 2 renewals or fixed crediting period of max. 10 years)?	1,2	Fixed crediting period of max.10 years is chosen. It is reasonable.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
D. Environmental impacts				
D.1. Documentation on the analysis of the environmental impacts, including transboundary impacts				
D.1.1. Has the analysis of the environmental impacts of the project activity been sufficiently described?	1,2 , 13	Yes. The Project Activity has undergone and passed full Environmental Impact Assessments (EIA) in line with the requirements of the Chinese Government on August 29 2005.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
D.1.2. Are there any Host Party requirements for an Environmental Impact Assessment (EIA), and if yes, has an EIA been approved?	1,2 , 13	Yes. EIA is a mandatory requirement in China. The approval of the EIA is on Sept. 5 of 2005.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
D.1.3. Will the project create any adverse environmental effects?	1,2 , 13	Environmental impacts arising from this project are considered insignificant; therefore, it is not necessary to make additional explanation here.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
D.1.4. Were transboundary environmental impacts identified in the analysis?	1,2 , 13	According to the results of EIA there is no transboundary environmental impact.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Validation Protocol

Project Title: Hebei Wasted Gas based Captive Power Plant Project in Longgang Group

Date of Completion: 15th April 2009

Number of Pages: 64



Industrie Service

CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	PDD in GSP	Final PDD
D.2. If environmental impacts are considered significant by the project participants or the host Party, please provide conclusions and all references to support documentation of an environmental impact assessment undertaken in accordance with the procedures as required by the host Party				
D.2.1. Have the identified environmental impacts been addressed in the project design sufficiently?	1,2 , 13	Environmental impacts arising from this project are considered insignificant; therefore, it is not necessary to make additional explanation here.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
D.2.2. Does the project comply with environmental legislation in the host country?	1,2 , 13	Yes. It complies with environmental legislation in China.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
E. Stakeholders' comments				
E.1. Brief description how comments by local stakeholders have been invited and compiled				
E.1.1. Have relevant stakeholders been consulted?	1,2	In Feb. 2007, Longgang Group carried out a survey on the local residents and comments received from the survey are summarized as follows. The government of Neiqiu Country issued a support letter for the Project after conducting sufficient investigation. It is available for DNA and DOE checking.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
E.1.2. Have appropriate media been used to invite comments by local stakeholders?	1,2	Yes. Questionnaires have been applied for surveying the residents' comments.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
E.1.3. If a stakeholder consultation process is required by regulations/laws in the host country, has the stakeholder consultation process been carried out in accordance with such regulations/laws?	1,2	Yes. it is a mandatory requirements during EIA period in China.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
E.1.4. Is the undertaken stakeholder process that was carried out described in a complete and transparent manner?	1,2	Yes. The description is clearly and transparency.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Validation Protocol

Project Title: Hebei Wasted Gas based Captive Power Plant Project in Longgang Group

Date of Completion: 15th April 2009

Number of Pages: 64



Industrie Service

CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	PDD in GSP	Final PDD
E.2. Summary of the comments received				
E.2.1. Is a summary of the received stakeholder comments provided?	1,2	The survey was conducted through distributing and collecting responses to a questionnaire. Totally 50 questionnaires returned out of 48 with 96% response rate. The summary is provided in this section.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
E.3. Report on how due account was taken of any comments received				
E.3.1. Has due account been taken of any stakeholder comments received?	1,2	The project owner has taken full consideration of relevant comments and suggestions from stakeholders in the process of project construction. People and local government are all very supportive of the Project therefore it is not necessary to modify the Project due to the comments received.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
F. Annexes 1 - 4				
F.1. Annex 1: Contact Information				
F.1.1. Is the information provided consistent with the one given under section A.3?	1,2	Yes. They are consistent.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
F.1.2. Is the information on all private participants and directly involved Parties presented?	1,2	Yes. Xingtai Longhai Steel Group Co., Ltd and PEAR Carbon Off-set Initiative, Ltd have been presented in annex 1.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
F.2. Annex 2: Information regarding public funding				
F.2.1. Is the information provided on the inclusion of public funding (if any) in consistency with the actual situation presented by the project participants?	1,2	Yes. There is no public funding from Annex I Parties for this Project.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
F.2.2. If necessary: Is an affirmation available that any such funding from Annex-I-countries does not result in a diversion of	1,2	NA	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Validation Protocol

Project Title: Hebei Wasted Gas based Captive Power Plant Project in Longgang Group

Date of Completion: 15th April 2009

Number of Pages: 64



Industrie Service

CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	PDD in GSP	Final PDD
ODA?				
F.3. Annex 3: Baseline information				
F.3.1. If additional background information on baseline data is provided: Is this information consistent with data presented by other sections of the PDD?	1,2	Yes. The background information on baseline data is provided. and this information is consistent with data presented by other sections of the PDD.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
F.3.2. Is the data provided verifiable? Has sufficient evidence been provided to the validation team?	1,2	Yes. They are verifiable by the local auditor during onsite audit.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
F.3.3. Does the additional information substantiate / support statements given in other sections of the PDD?	1,2	Yes. The additional information substantiate / support statements given in other sections of the PDD	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
F.4. Annex 4: Monitoring information				
F.4.1. If additional background information on monitoring is provided: Is this information consistent with data presented in other sections of the PDD?	1,2	No additional background information on monitoring is provided. Hence this issue is not applicable.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
F.4.2. Is the information provided verifiable? Has sufficient evidence been provided to the validation team?	1,2	No additional background information on monitoring is provided. Hence this issue is not applicable.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
F.4.3. Do the additional information and / or documented procedures substantiate / support statements given in other sections of the PDD?	1,2	No additional background information on monitoring is provided. Hence this issue is not applicable.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Validation Protocol

Project Title: Hebei Wasted Gas based Captive Power Plant Project in Longgang Group

Date of Completion: 15th April 2009

Number of Pages: 64



Industrie Service

Table 2 Resolution of Corrective Action and Clarification Requests

Clarifications and corrective action re-quests by validation team	Ref. to table 1	Summary of project owner response	Validation team conclusion
<u>Corrective Action Request 1:</u> The planned BF No. 5&6 are not part of the proposed project activity. They should be taken out of the PDD.	A.2.1	BF No.5&6 has been taken out of the PDD.	☑
<u>Corrective Action Request 2:</u> In order to understand better for international readers, the map in English is required. In the project description must be added also the gas tank of 80,000 m3 and this tank must be evaluated because it plays an important role in the financial analysis in B.5.	A.4.1.1	The map in section A.4.1.4 of PDD has been changed into English version. The description of gas tank has been added in A4.3 of PDD, as followed: "In the practical operation, the flow and pressure of waste gas fluctuates widely. In order to reduce the influence of fluctuation on the generation, the project owner also planned to install a gas tank of 80,000m ³ which costs nearly 30,000,000RMB."	☑
<u>Corrective Action Request 3:</u> There is an inconsistent description in the FSR. The completed date of FSR is indicated on July 1 of 2006. But in the content of FSR, the page 5, the planned construction period is from March of 2005 to Feb. of 2006. Please clarify this issue. The value of 34.2 GWh are energy and not power. Please correct it in the PDD.	A.4.3.5	According to the explanation from Longgang Group, the given planned construction period in the page 5 of FSR is intended to be in consistency with the initial approval letter (certificate) of the project, moreover, the FSR is mainly aimed at investment decision-making and applying a delay for the project construction due to investment overrun. Actually, the construction period was delayed one year due to diversely barriers (please referred to B.5 in the revised PDD), and the construction period is from January 2007 to December 2007. The value of 34.2GWh is the amount of electricity de-	☑

Validation Protocol

Project Title: Hebei Wasted Gas based Captive Power Plant Project in Longgang Group

Date of Completion: 15th April 2009

Number of Pages: 64



Industrie Service

		livered to the recipient. In order to avoid misunderstanding, the expression in A4.3 has been revised.	
<u>Corrective Action Request 4:</u> Please describe a detailed timeline of the proposed project in the PDD. It includes all the important events, i.e. the date of consideration CDM, FSR and its approval, EIA and its approval, the project confirmation by authorized government, the date of purchase contract for main devices, the date of starting construction and the date of operation or planned if applicable. All components of the proposed project should be included.	A.4.3.10	A timeline of the proposed project has been added in section B.5 of PDD.	☑
<u>Corrective Action Request 5:</u> Please provide the operational lifetime of the project equipment	A.4.4.2	The operational lifetime of the main equipment of the project is 20 years. This value has been added in table 1 in section A4.3.	☑
<u>Corrective Action Request 6:</u> Please indicate the latest approval version of the "Tool for the demonstration and assessment of additionality" in the PDD.	B.4.10	<i>Tool for the demonstration and assessment of additionality (version 05.2)</i> is used in the PDD.	☑
<u>Corrective Action Request 7:</u> --The project starting date is on Jan. 2007 according to the description of Supervision work summarizing report of 12MW Waste Gas based power plant in Xingtai Longhai, dated on Jan. 14 2008 by Hebei Xingyuan engineering construction supervision Co. Ltd. --The direct evidence of the project starting date should be delivered to the DOE.	B.5.1	--In the perspective of CDM, the project starting date could be recognized as Jan. 7 2007, which is the earliest of the dates on which the main equipment purchase or construction contract or construction begins. Starting date of the project activity in section C.1.1 has been revised yet. --The contract of main equipment and total construction can support the starting date of project activity. Please refer to "order contract of generator sign on 7 th	☑

Validation Protocol

Project Title: Hebei Wasted Gas based Captive Power Plant Project in Longgang Group

Date of Completion: 15th April 2009

Number of Pages: 64



Industrie Service

		<i>Jan, 2007", "order contract of turbine sign on 9th Jan, 2007", "order contract of boiler sign on 9th, 2007" and "construction contract sign on 10 Jan, 2007".</i>	
Corrective Action Request 8: --We need proof concerning the development in the last years of the electricity tariff. That way we can estimate if a 10% increase in the next 10 years is really not plausible. --The IRR calculation sheet in excel should be delivered to the DOE. --The utilized data sources should be indicated in the PDD and translated in English and delivered to the DOE.	B.5.7	---Countrywide average power sales price (including Value Added Tax) charged by power grid company of 2004, 2005 and 2006 is separately 0.471RMB/KWh, 0.48498RMB/KWh and 0.50992RMB/KWh. The price in 2007 is the same as in 2006. The mechanism of fixed-price is adopted in financing analysis of FSR and it is a common phenomenon in engineering assessment of China. Some proof and more clarification please refer to <i>the increasing trend of power price</i> . ---The IRR calculation sheet in excel is provided as requirement. ---The utilized data sources has been added both in PDD and IRR calculation sheet	☑
Corrective Action Request 9: Please indicate the data sources about common practice analysis in the PDD and provide them to the DOE.	B.5.11	The data sources about common practice analysis are based on government published information. For details of investigation process and result please refer to <i>Investigation the Common Practice of Gas Based Power Project and TRT Project in Hebei</i> .	☑
Corrective Action Request 10: Please add the Version of the methodology in the PDD.	B.6.1.1	The version of the methodology has been added in section B.6.1 of PDD as follow: Note: the emission reduction is calculated according to ACM0012, version 02, except for the calculation of capping baseline emission (f_{cap}). The value of f_{cap} for TRT unit is calculated according to ACM0012, version 03.1.	☑

Validation Protocol

Project Title: Hebei Wasted Gas based Captive Power Plant Project in Longgang Group

Date of Completion: 15th April 2009

Number of Pages: 64



Industrie Service

<p><u>Corrective Action Request 11:</u> As it is C2H2 as the fuel for ignition, not the BFG described in the FSR, hence the project emission should be considered and discussed in the PDD.</p>	B.6.1.2.	The project emission due to C2H2 used as auxiliary fossil fuel for ignition is considered and discussed in the PDD. Please refer to section B.3, B6.1, B6.3, and B7.1 and B7.2	☑
<p><u>Corrective Action Request 12:</u> Please take out from the formula for the BE the two F factors. It must be applied exactly like in the methodology.</p>	B.6.1.3	The parameter of f_{cap} and f_{wg} in the formula of BE calculation has been corrected. Please refer to the relevant part of baseline emission calculation.	☑
<p><u>Corrective Action Request 13:</u> <u>Corrective Action Request No.1.</u> The list of parameters is considered to be incomplete. Please add the data or parameters into B.6.2 of the PDD, which are marked "No" in the following tables of the protocol. The list is still not exactly like in Methodology. Please amend it accordingly.</p>	B.6.2.1	<p>---f_{wg}, has been added in section B.6.2 in the PDD.</p> <p>--- f_{cap} is an intermediate calculating parameter, it is not fit to put it in section B.6.2 or B.7.1. And a parameter in the formula to calculation f_{cap} is required to monitor during the crediting period.</p> <p>---$Q_{WG,y}$ is an parameter required to monitor, it is not fit to put it in section B6.2 in the PDD</p> <p>--- $Q_{BL, product}$ has been added in section B.6.2</p> <p>--- $q_{wg, product}$, has been added in section B.6.2 in the</p> <p>---electricity imports According to ACM0012, there is no parameter called "electricity imports", so I don't know what does "electricity imports" mean.</p>	☑
<p><u>Corrective Action Request 14:</u> Some parameters in the list are incomplete. Please add the parameters into the PDD, which is marked "No" in the following tables of the protocol.</p>	B.7.1.1	<p>--- EFCO2,EL,y is chosen as the grid combined margin emission factor and the ex ante option is selected to calculate this parameter. So, it dose not need including in B.7.1 in the PDD.</p> <p>---$Q_{i,h}$ is used to calculate f_{wg}, but f_{wg} is equal to 1 as all the electricity is produced by using waste gas and waste pressure. So $Q_{i,h}$ is not applied in PDD</p>	☑
<p><u>Corrective Action Request 15:</u></p>	B.7.2.3	Revision has been done in B.7.1 in PDD	☑

Validation Protocol

Project Title: Hebei Wasted Gas based Captive Power Plant Project in Longgang Group

Date of Completion: 15th April 2009

Number of Pages: 64



Industrie Service

The ammeters diagram should be revised according to the actual situation.			
CRs			
<p>Clarification Request 01</p> <p>During audit on site, there are several project participants, like Xingtai Longhai Steel Group Co., Ltd, Xingtai Longhai Steel Group generation electricity Co. Ltd, Xingtai Xingli Group company, Neiqiu county Heng'an power Co. Ltd. And Handan city Wanxing Co. Ltd. Please clarify what is their relationship clearly in the PDD. And revise the associated information in A.2 and Annex 1, as the actual project owner should be Xingtai Longhai Steel Group generation electricity Co. Ltd,</p>	A.2.3	<p>Hebei Wasted Gas based Captive Power Plant Project (hereafter referred to the Project for short) was originally promoted by Xingtai Longhai Steel Group Co., Ltd (hereafter referred to as Longgang Group). But during the preparation, Longgang Group could hardly afford the huge sum of investment and then resorted to raise fund with the 3 other companies by means of establishing a stock company to construct and operate the project. (the involved other 3 companies include Xingtai Xingli Group Company, Neiqiu country Heng'an Power Co., Ltd and Handan city Wanxing industrial Co., Ltd.)</p> <p>As a result, Xingtai Longhai Steel Group Electricity Generation Co., Ltd, which was established by four entities mentioned above, was founded. Though the legal project owner is Xingtai Longhai Steel Group Electricity Generation Co., Ltd, Longgang Group has been appointed to cope with all the matters related to CDM on the behalf of the project participant. In addition, it is in consistency with the designated owner in original approval letter of FSR and EIA.</p> <p>The relationship between the five companies has been clarified in table 4 in section B.5 of PDD.</p> <p>So, in A.2 and Annex 1, the information of PP can still be Xingtai Longhai Steel Group Co., Ltd.</p>	<input checked="" type="checkbox"/>

Validation Protocol

Project Title: Hebei Wasted Gas based Captive Power Plant Project in Longgang Group

Date of Completion: 15th April 2009

Number of Pages: 64



Industrie Service

		<i>"appointment letter for longgang in CDM procedure"</i> and <i>"investment protocol"</i> can prove their relationship.	
Clarification Request 02 What is also not clear, is why are 2.7 MW needed for self-consumption. Are these 2,7 MW part of the 6 MW going to Longgang or are they extra?	A.2.4	<p>The 2.7MW is the inner consumption of the proposed project, other than the power consumption of Longgang Group. The 2.7MW would be consumed by the auxiliary equipment of the project activity, such as waster pump, blower, etc. The capacity of the project is 30MW (2×12MW waste gas based & 2×3MW TRT), and the power consumption rate of the project is assumed as 9%, therefore the self-consumption is 2.7MW (30MW*9% =2.7MW).</p> <p>In order to avoid misunderstanding, the expression of A.2 has been revised, as follow: "Till 2006, the electricity demand of Longgang Group has come to about 52 MW and is entirely provided via local grid that belongs to NCPG. Considering 30MW capacity of the proposed project, all amount of electricity supplied by the project will meet the demand of Longgang Group, no surplus will be sent to the grid. After being put into operation, the proposed project is able to deliver electricity of totally 196.2 GWh per year replacing equivalent amount of electricity purchasing from NCPG, simultaneously will realize GHG emission reduction of 202,105tCO₂e."</p>	☑
Clarification Request 03 Please clarify if a capacity expansion of an existing facility is planned.	B.2.9	<p>Although both new and existing facilities are involved in the proposed project, there is no capacity expansion of the existing facilities, blast furnaces and converters, has been involved.</p> <p>The waste gas and pressure used in the proposed</p>	☑

Validation Protocol

Project Title: Hebei Wasted Gas based Captive Power Plant Project in Longgang Group

Date of Completion: 15th April 2009

Number of Pages: 64



Industrie Service

		project activity is partly from existing No.3 & No.4 blast furnaces and No.1 & No.2 converters, other part from new ones in Longgang Group. Please refer to section A4.3 in PDD.	
Clarification Request 04 Why is C2H2 excluded? Was it also before the project activity used somewhere else in the facility? If yes, where exactly?	B.3.5	The project emission due to C2H2 used as auxiliary fossil fuel for ignition is included and discussed in the PDD. Please refer to section B.3, B6.1, B6.3, and B7.1 and B7.2	<input checked="" type="checkbox"/>
Clarification Request 05 BFG and LDG is being burnt according the PDD. This means it needs to be cleaned. Please clarify why no cleaning and so no project emissions	B.3.7	BFG and LDG are being burnt and cleaning both in the project activity and in baseline scenario. According to ACM0012: "Note: In case the electricity was consumed in gas cleaning equipment in baseline as well, project emission due to electricity consumption for gas cleaning can be ignored." (ACM0012, ver.02 P18), so this part of project emission can be ignored. Please refer to section B.3	<input checked="" type="checkbox"/>
Clarification Request 06 As the purchasing contract is signed on Jan 7 of 2007 before the date of directorate summary on Jan. 20 of 2007. Please clarify why the company considered to apply for CDM after the decision to invest this project (the purchasing contract of generation units).	B.5.1	Starting date of the project activity is recognized on 07/01/2007. As early as 16 th August 2005, the decision of applying CDM for the project was made in which the benefits of CDM had been seriously considered. (Please refer to "meeting minute of CDM decision on 16 th Aug, 2005"). And the CDM consulting contract was signed on 18 th August 2005. (Please refer to "CDM consulting contract on 18 th Aug, 2005") The project construction had been delay about one year due to the shortage of fund. As for the directorate summary dated on 20 th January 2007, it is not the evidence which indicates serious CDM consideration has been made prior to the starting date of project, but the work meeting at the beginning	<input checked="" type="checkbox"/>

Validation Protocol

Project Title: Hebei Wasted Gas based Captive Power Plant Project in Longgang Group

Date of Completion: 15th April 2009

Number of Pages: 64



Industrie Service

		of construction. It is used to prove the barrier of short on funds during the construction period and the revenue of CERs would alleviate the barrier. On the meeting minute, it says that the stockholders could not afford so huge sum of investment that the whole project had to be completed step by step. The main project of 24MW gas based power station would be firstly complete, then the construction of 6MW TRT and the installation of 80,000m ³ gas storage tank. The revenue of CERs will contributes more to the construction of the TRT unit and gas tank. Please refer to <i>"minute of board meeting on 20th January 2007"</i> .	
<p>Clarification Request 07</p> <p>Projects in China with TRT are already difficult to prove additionality. Especially what is written in the PDD is not at all good.</p> <p>They say that CER income will be used almost 100% to finance the TRT part of the project since the 24 MW part is rentable by its own.</p>	B.5.6	<p>I think the TRT which was mentioned difficult to prove additionality is been installed in large scale blast furnace. However, the TRT in PDD is installed in small scale blast furnace of volume 450m³. (Blast furnaces can be classified into large-scale furnaces and small scale furnaces by the volume threshold of 1000m³ and there is radical distinction between them on the energy content of top pressure¹.) The top pressure and the gas temperature of the small-scale blast furnace are much lower than the large-scale blast furnace. Furthermore, the capacity and steady operation of TRT installed in small-scale blast can not compared to which installed in large-scale. And even in 2006, there was governmental idea that furnace below 1000m³ is not eligible to install TRT unit due to usually the top</p>	<input checked="" type="checkbox"/>

¹ http://www.gov.cn/gzdt/2006-07/01/content_325173.htm

Validation Protocol

Project Title: Hebei Wasted Gas based Captive Power Plant Project in Longgang Group

Date of Completion: 15th April 2009

Number of Pages: 64



Industrie Service

		<p>pressure being lower than the threshold value of 0.15 MPa². (<i>improper to install TRT on blast furnace below 1000m³</i>)</p> <p>So applying TRT to small-scale blast furnace is difficult in technology and less financial attractive.</p>	
<p>Clarification Request 08</p> <p>--In the financial analysis, O&M cost (52.06 Million RMB) is about 1/3 of total investment (159.50 Million RMB). This is extremely high and against economic assessment common practise in China. How did the design institute conclude this cost?</p> <p>--Why do the PPs use only 10% for sensitivity analysis? Why not 20%? 10% is the minimum for a sensitivity analysis, there must be a good explanation why it is used.</p>	B.5.7	<p>---The O&M cost is calculated based on the annual demand e.g. fuel, materials, water and relevant services. It is available in FSR, and further calculation process is reflected in the associated IRR calculation sheet.</p> <p>The waste gas price (BFG0.04RMB/m³ and LDG0.08RMB/m³) can be proved by the gas supply agreement between Longgang Group and Xingtai Longhai Steel Group generation electricity Co. Ltd and other documents (please refer to <i>THE PRICE OF GAS</i>)</p> <p>Take Project: 1397 <i>Comprehensive utilization of waste coal gas for electricity generation project in Shaanxi Xinglong Cogeneration Co., Ltd.</i> which has been registered on 26 Aug 08 for example, its total investment is 115 million RMB and O&M cost is 49 million RMB. Furthermore, the average cost per MWh electricity delivered is RMB 270, which is lower than the contemporary average cost RMB 300 of other coal-fired thermal power in Hebei Province. (Please refer to “<i>evidence for coal power cost</i>”) Hence it is with no reason to be considered as “extremely high”, isn’t it?</p> <p>In addition, the amount of 159.50 million RMB is the fixed asset, instead of the total investment that is 177.64 million RMB.</p>	<input checked="" type="checkbox"/>

² http://www.ndrc.gov.cn/xwfb/t20060630_74968.htm

Validation Protocol

Project Title: Hebei Wasted Gas based Captive Power Plant Project in Longgang Group

Date of Completion: 15th April 2009

Number of Pages: 64



Industrie Service

		<p>---According to the data issued by National Bureau of Statistics of China, CPI (Consumer Price Index) of 2007 increased by 4.8% compared with last year, retail price of goods increased by 3.8%, the price of fixed-asset investment increased by 3.9%, the price of industrial product increased 3.1%, the price of raw material and fuel increased by 4.4%.³ All the increase rates mentioned above which would have influence on the sensitive factors, including fix-asset investment, O&M cost and revenue could not exceed 10%, so variable range of 10% for sensitive analysis is reasonable.</p> <p>The mechanism of fixed-price is adopted in financing analysis of FSR and it is a common phenomenon in engineering assessment of China.</p>	
<p>Clarification Request 09</p> <p>Is the Institute which did the Feasibility Study Report accredited to do such studies?</p>	B.6.1.2	<p>Handan North China Metallurgy Engineering Design Co., Ltd. did the Feasibility Study Report. The company got qualification certificate which was accredited by National Development and Reform Committee on this scope of project in 2003. Please refer to the <i>Qualification Certificate of Engineering Consulting Service</i>. (Please refer to “qualification certificate of engineering consulting service”)</p>	<input checked="" type="checkbox"/>
<p>Clarification Request 10</p> <p>Why do PPs use NCV calculating fcap for the two first boilers?</p>	B.6.1.3	<p>After check the monitoring plan with PP, NCV is taken out of the formula of fcap.</p>	<input checked="" type="checkbox"/>

³ http://www.stats.gov.cn/tjgb/ndtjgb/qgndtjgb/t20080228_402464933.htm

Validation Protocol

Project Title: Hebei Wasted Gas based Captive Power Plant Project in Longgang Group

Date of Completion: 15th April 2009

Number of Pages: 64



Industrie Service

Table 3 Unresolved Corrective Action and Clarification Requests (in case of denials)


Clarifications and / or corrective action requests by validation team	Id. of CAR/CR	Explanation of Conclusion for Denial
-	-	-

Validation of the CDM Project:
Hebei Wasted Gas based Captive Power Plant Project in Longgang Group




Industrie Service


Annex 2: Information Reference List

Final Report	2009-04-15	Validation of the “Hebei Wasted Gas based Captive Power Plant Project in Longgang Group” Information Reference List	Page 1 of 7	
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Ref. No.	Issuance and/or submission date (dd/mm/yyyy)	Title/Type of Document	Author/Editor/ Issuer	Additional Information (Relevance in CDM Context)
1.	12/10/2007	PDD of “Hebei Wasted Gas based Captive Power Plant Project in Longgang Group ”, Version: 01 PDD of “Hebei Wasted Gas based Captive Power Plant Project in Longgang Group ”, Version: 04	KOE Environmental Consulting, Inc. (Japan)	PDD for GSP
2.	30/11/2007	ACM0012 (version 02) – “Consolidated baseline methodology for GHG emission reductions for waste gas or waste heat or waste pressure based energy system”	UNFCCC	
3.	26/08/2008	“Tool for the demonstration and assessment of additionality” (Version 05)	UNFCCC	
4.	29/07/2008	“Tool to calculate the emission factor for an electricity system” (Version 01)	UNFCCC	
5.	27/03/2008	Participant list of on-site interviews	TÜV SÜD	
6.	27/03/2008	On-site interviews conducted by TÜV SÜD. Validation Team: Validation team: Mr. Carl Zhou CDM Auditor, TUV SÜD Industries Service GmbH Interviewed persons: Mr. Yao Qiang Xingtai Longhai Steel Group Co., Ltd Vice general manager Mr. Zhao Yanwu Xingtai Longhai Steel Group Co., Ltd leader of machine and power department Miss Wang Jianfen Xingtai Longhai Steel Group Co., Ltd assistant of machine and power department Miss Zhang Jianying Xingtai Longhai Steel Group Co., Ltd	TÜV SÜD	

Final Report	2009-04-15	Validation of the “Hebei Wasted Gas based Captive Power Plant Project in Longgang Group” Information Reference List	Page 2 of 7	 Industrie Service
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Ref. No.	Issuance and/or submission date (dd/mm/yyyy)	Title/Type of Document	Author/Editor/ Issuer	Additional Information (Relevance in CDM Context)
		assistant of machine and power department Mr. Duan Debiao Xingtai Longhai Steel Group Co., Ltd leader of development and planning department Mr. Cao Yuan KOE Environmental Consulting, Inc. (Japan) project manager Miss Huang Zhifang KOE Environmental Consulting, Inc. (Japan) project assistant		
7.	April / 2006	Feasibility Study Report of “Hebei Wasted Gas based Captive Power Plant Project in Longgang Group”	Hebei province Huabei metallurgy construction engineering design Co. Ltd.	IRR input data source Early CDM Consideration (2)
8.	16/08/2005	Meeting Minutes of CDM decision by the directors of the group	Xingtai Longhai Steel Group Co., Ltd	Early CDM Consideration (1)
9.	29/08/2005	EIA was drafted by Hebei province metallurgy institute:	<i>Hebei province metallurgy institute:</i>	
10.	05/09/2005	The approval of EIA	Environmental Protection Bureau of Hebei Province	
11.	26/12/2006	The eligibility notification of check and accept for BFG 12MW generation units of Xingtai Longhai Steel Group Generation for electricity Co., Ltd in the first stage.	<i>Hebei province power office</i>	
12.	Oct./2006	The investment agreement of the proposed project	<i>Xingtai Xingli Group company, Xingtai Longhai Steel Group Co., Ltd, Neiqiu county Heng'an power Co. Ltd. And</i>	

Final Report	2009-04-15	Validation of the "Hebei Wasted Gas based Captive Power Plant Project in Longgang Group"	Page 3 of 7	 Industrie Service
		Information Reference List		


Ref. No.	Issuance and/or submission date (dd/mm/yyyy)	Title/Type of Document	Author/Editor/ Issuer	Additional Information (Relevance in CDM Context)
			<i>Handan city Wanxing Co. Ltd.</i>	
13.	24/01/2005	The agreement of land tenancy	<i>Neiqiu county Hechun village committee</i> Xingtai Longhai Steel Group Co., Ltd	
14.	17/08/2006	The loan evidences: Reply to Project Loan of Xingtai Longhai Steel Group Co., Ltd on "Waste Gas Based Power Plant Project"	<i>China agriculture bank Xingtai branch.</i> Xingtai Longhai Steel Group Co., Ltd	
15.	20/08/2006	The loan evidences: Reply to Project Loan of Xingtai Longhai Steel Group Co., Ltd on "Waste Gas Based Power Plant Project"	China Construction Bank Xingtai Branch Xingtai Longhai Steel Group Co., Ltd	
16.	18/12/2007	Agreement of connection to grid	<i>Xingtai power supply co. ltd.</i> Xingtai Longhai Steel Group Co., Ltd	
17.	06/06/2007	The feedback about grid connection of the proposed project.	<i>Hebei province power company ltd.</i>	
18.	27/03/2008	IRR calculation excel sheet in English	KOE Environmental Consulting, Inc. (Japan)	

Final Report	2009-04-15	Validation of the “Hebei Wasted Gas based Captive Power Plant Project in Longgang Group” Information Reference List	Page 4 of 7	
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Ref. No.	Issuance and/or submission date (dd/mm/yyyy)	Title/Type of Document	Author/Editor/ Issuer	Additional Information (Relevance in CDM Context)
19.	07/01/2007	Purchasing contract of generation units	Shandong Ji'nan generation electricity devices plant Xingtai Longhai Steel Group Co., Ltd	
20.	09/01/2007	Purchasing contract of turbines	Shandong Qingdao energy saving turbines Co. Ltd. Xingtai Longhai Steel Group Co., Ltd	
21.	09/01/2007	Purchasing contract of boilers	Wuxi Huaguang boiler Co. Ltd. Xingtai Longhai Steel Group Co., Ltd	
22.	01/10/2006	The evidence of stakeholder meeting, including questionnaires	Xingtai Longhai Steel Group Co., Ltd	
23.	14/01/2008	Supervision work summarizing report of 12MW Waste Gas based power plant in Xingtai Longhai,	Hebei Xingyuan engineering construction supervision Co. Ltd.	
24.	06/07/2006	The responsibility letter of energy saving target	Hebei province government	
25.	06/01/2007	The agreement of waste gas supply between Xingtai Longhai Steel Group Co., Ltd and Xingtai Longhai Steel Group generation electricity Co. Ltd.	Xingtai Longhai Steel Group Co., Ltd Xingtai Longhai Steel Group generation electricity	

Final Report	2009-04-15	Validation of the “Hebei Wasted Gas based Captive Power Plant Project in Longgang Group” Information Reference List	Page 5 of 7	
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Ref. No.	Issuance and/or submission date (dd/mm/yyyy)	Title/Type of Document	Author/Editor/ Issuer	Additional Information (Relevance in CDM Context)
			Co. Ltd.	
26.	2005	The investment planning 2006-2020 of <i>Xingtai Longhai Steel Group Co., Ltd</i>	Xingtai Longhai Steel Group Co., Ltd	
27.	28/02/2008	The evidence of electricity tariff: invoice between <i>Xingtai Longhai Steel Group Co., Ltd and Xingtai Longhai Steel Group generation electricity Co. Ltd. The value is 0.438034188 (including tax).</i>	Xingtai Longhai Steel Group Co., Ltd and Xingtai Longhai Steel Group generation electricity Co. Ltd	
28.	30/08/2007	The calibration certificate for electricity meter, type SL7000, No. 2007-1287,	<i>Hebei province power institute.</i>	
29.	17/08/2007	The calibration certificate for electricity meter, type SL7000, No. 2007-1268,	<i>Hebei province power institute.</i>	
30.	2005	Gas Security Regulation for Industry Enterprise GB6222-2005	China Electricity Industry Press.	
31.	2002	Notice on Strictly Prohibiting the Installation of Fuel-fired Generators with the Capacity of 135 MW or Below issued by the General Office of the State Council, decree no. 2002-6.	General Office of State Council, P.R. China.	
32.	Aug /1997	Interim Rules on the Installation and Management of Small-scale Fuel-fired Generators (issued in Aug., 1997)	China Electricity Council	
33.	August/ 2007	The latest delineation published by DNA of China	<i>North China Power Grid (NCPG)</i>	
34.	2002-2006	China Electric Power Yearbook,	China Electricity Council	
35.	18/08/2005	The consulting contact of CDM project development	<i>KOE Environment</i>	Early CDM

Final Report	2009-04-15	Validation of the “Hebei Wasted Gas based Captive Power Plant Project in Longgang Group” Information Reference List	Page 6 of 7	 Industrie Service
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Ref. No.	Issuance and/or submission date (dd/mm/yyyy)	Title/Type of Document	Author/Editor/ Issuer	Additional Information (Relevance in CDM Context)
			<i>Consultancy, Inc. (Japan), Longhai Steel Group generation electricity Co. Ltd</i>	Consideration (2)
36.	20/01/2007	The first Meeting of the directory board on: ---Meeting of board on bid result ---Appointment letter for longgang in CDM procedure	<i>Xingtai Longhai Steel Group Co., Ltd,</i>	
37.	August / 2006	Rejections for the application of the project loan	Agricultural Bank of China	
38.	January 2007	Order contract of generator sign on 7th Jan,2007		
39.	30/06/2008	The demonstration of making BFG&LDG price form third party, from China smelt Jingcheng engineering technology Co. Ltd.	<i>China smelt Jingcheng engineering technology Co. Ltd.</i>	
40.	August 2006	Rejections for the application of the project loan	Construction Bank of China	
41.	20/01/2008	Emission Reductions Purchase Agreement with PEAR Carbon		
42.	10/01/2007	The construction contract of “ <i>Hebei Wasted Gas based Captive Power Plant Project in Longgang Group</i> ”	<i>Xingtai Xingli Group Co. Ltd.</i> Xingtai Longhai Steel Group Co., Ltd	
43.	07/03/2001	Essays: The cause to damage of TRT blade and preventive measures	Fangyong, Central Energy Resource Factory	

Final Report	2009-04-15	Validation of the “Hebei Wasted Gas based Captive Power Plant Project in Longgang Group” Information Reference List	Page 7 of 7	 Industrie Service
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Ref. No.	Issuance and/or submission date (dd/mm/yyyy)	Title/Type of Document	Author/Editor/ Issuer	Additional Information (Relevance in CDM Context)
44.	Feb/ 2008	Essays: the increasing trend of power price from 2004 to 2007	www.ewp.org.cn www.stats.gov.cn	
45.	30/06/2006	Notification on the improper to install TRT on the blast furnace below 1000 m3	Development and Reform Committee of PR. China.	
46.	25/06/2008	LoA from China DNA (2008)1594	Development and Reform Committee of PR. China.	
47.	11/12/2008	LoA from Japan DNA	Ministry of Economy, Trade and Industry of Japan.	
48.	13/11/2008	MoC	Xingtai Longhai Steel Group Co., Ltd, Pear Carbon Offset Initiative, Ltd.	
49.	30/06/2008	Foot note 18: State owned steel & iron and coal enterprises merged in Hebei Province	www.chinanews.com	
50.	04/02/2008	Foot note 19: Status of the steel & iron and coal enterprises in Hebei Province	www.tt91.com	
51.	Jan/2007	Foot note 20: The similar projects searching in the Hebei province	www.hebhb.gov.cn www.12369.net	
52.	01/07/2006	Foot note 26: The Answer for the restructuring policies of the iron & steel industry from the NDRC China	www.gov.cn	